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Inside Dope

By George F. Taubeneck

For Free
Time Is at a Premium
Keep 'Em Cooling!
Silver Anniversary
'Desert Rat' Roy
In the Philippines
Standing of the Clubs

For Free

We had a dandy phone call the other day. Just dandy.

It was long distance from New York, and the voice on the other end of the line started out something like this:

"You don't know me, but I've heard about you. They tell me you know what's going on in the refrigeration business. Well, we have a big plant here, and we can make cabinets for these home freezers. Gimme some names and addresses of manufacturers to contact."

So, obligingly, we selected a few concerns which might be interested, and passed on some pretty valuable information he might have had a tough time obtaining otherwise.

"That's fine," he responded. "Now, tell you what I want you to do. Every month I want you to write me a letter, supplying me with new names of prospects."

"Here's a better suggestion," we returned. "Subscribe to AIR CONDITIONING & REFRIGERATION NEWS, and you'll get all that information weekly, plus a lot of other things you'll want to know."

There was a pause. Finally:

"We-e-ell, send me a free copy, and we'll see if there's anything in it for us!"

The information he had already received over the phone could turn out to be worth thousands of dollars to him, yet he was unwilling to spend four bucks to a subscription to the NEWS. And he wanted us to supply him with a free monthly informational service!

Time Is at a Premium

This brassy little incident serves to point up one of the sometimes-unseen and often too-little-appreciated services of a good industry paper. Perhaps a third of the editors' time is spent digging up information requested by subscribers and customers.

Some inquiries require days, and even weeks, of research. And every day's mail is loaded with them. This is part of our job, and we're glad to do it for *customers*—even if it does make us wish there were 36 hours in the day.

But free work for non-subscribers? Huh-uh. We're in business here.

Keep 'Em Cooling!

Windows on an Atlantic Coast line train en route to Richmond from Washington were kicked out and broken with suitcases by servicemen desperate for air one night recently.

Obstensibly the coaches were "air conditioned." All windows were sealed. As passengers crowded into the train at Washington, temperatures rose into the 100s, since the air conditioning wasn't functioning.

When the train pulled out of Washington, servicemen sweltering in the air-tight coaches took suitcases and shoes and broke windows, thus getting fresh air into the overcrowded compartments.

It was learned that this has happened before, during similarly hot days.

Point your own moral.

'Desert Rat' Roy

The sight of a Norge refrigerator in a Tunis, Africa, shop "gave me

(Concluded on Page 12, Column 3)

Rohr Aircraft Seeks WPB Okay For Household Units

CHULA VISTA, Calif.—Rohr Aircraft Corp. has applied to WPB for permission to build 12,000 household refrigerators during the remainder of 1945, according to an announcement made by Fred Rohr, president.

The application was made through a WPB field office. It is said that application for permission to build washing machines will be made shortly.

Rohr Aircraft Corp., which has been a producer of aircraft power plant assemblies, very recently became a subsidiary of International Detrola Corp. of Detroit, which acquired a more than 80% interest in Rohr.

(At Detrola's main headquarters in Detroit it was declared that nothing was known of Rohr's plans to make refrigerators, but it was said that Detrola "might have something to say soon" on its own plans for the mechanical refrigerator field.)

International Detrola acquired the controlling interest in Rohr aircraft "as part of an integrated postwar program of manufacturing home appliances, radios, aircraft parts and sub-assemblies, and other products, declared C. Russell Feldmann, Detrola's president and board chairman, who has also been elected chairman of the board of Rohr.

Steel Orders Frozen To Spread Supplies

WASHINGTON, D. C.—The "freezing" of third-quarter steel rolling mill order books for certain types of sheet and strip steel has been announced by WPB.

This action was taken as one of a series of moves designed to spread the available supply among metal working industries and to prevent sheet and strip steel from becoming a reconversion "bottleneck," WPB said.

Through this closing of the books, no steel producer can accept any new third-quarter orders for sheet or strip.

By this means, WPB said, it is planned to obtain concrete information regarding all open spaces on mill schedules for these products. Open spaces are expected to result

(Concluded on Page 32, Column 4)

G-E To Use Bloomfield Plant For Conditioners

BLOOMFIELD, N. J.—The production of air conditioning and commercial refrigeration equipment will completely occupy the Bloomfield works of General Electric Co. after the war, it is announced by Charles E. Wilson, president of the company.

Engineering and manufacturing activities of the company's industrial control division, which have occupied about half the facilities of the plant, will be transferred to Schenectady. The moves will require about two and a half years.

George R. Prout, general manager of the G-E air conditioning department, predicts that the demand for air conditioning and commercial refrigeration products will at least triple in the immediate postwar period. He said that the Bloomfield plant will continue to produce for civilian shipping marine refrigeration and air conditioning equipment which the company has made during the war.

Major changes in facilities will be made for the expansion in production of room air conditioners and models for commercial establishments.

Pressed Steel Car Asks Stock Vote on Appliance Mfg.

CHICAGO—Pressed Steel Car Co., Inc., one of the country's largest manufacturers of railroad cars, will produce refrigerators and appliances, and air conditioning and commercial refrigeration equipment, if stockholders okay the move.

Stockholders are to vote Aug. 2 on an amendment of the articles of incorporation which would permit the company to manufacture, buy, sell, and deal in household appliances and equipment, heating equipment, air conditioning equipment, refrigeration equipment, and all other articles of a similar nature.

Plans call for the production of the refrigeration equipment and appliances at the Hegewisch, Ill., plant. This plant was closed in December, 1937, but was reopened in 1940 for the production of tanks and self-propelled gun carriages. Tank production recently was terminated and 18% of the space is utilized in the production of gun carriages. In the statement to stockholders it was asserted that the expenditure of $750,000 would be required to convert the plant for the production of the proposed items.

It was also reported that the Hegewisch plant will be immediately available to begin production of the appliance items just as soon as stockholders should approve the amendment.

Net income of the company reported for 1944 was $1,847,585.

Utility Selling Not Likely To Change, EEI Tells NEWA

NEW YORK CITY — Although some utilities have dropped appliance merchandising, others plan to enter the selling field for the first time after the war. Thus the overall picture will remain unchanged, according to a survey of the Edison Electric Institute.

This fact, and others of interest to appliance men and utility representatives, was brought out at the recent joint meeting here of the planning committee of the National Electrical Wholesalers Association and the commercial planning committee of Edison Electric Institute.

Appliance wholesalers are also concerned with postwar competitive threats of national chains and factory branches, and are devoting considerable thought to training of salesmen, it was learned at the joint meeting.

The question of whether or not utilities will continue in the appliance merchandising field depends largely on their need for increased revenue, according to utility representatives present, headed by M. E. Skinner, chairman of the E.E.I. committee and vice president of Buffalo, Niagara & Eastern Power Corp., Buffalo.

Indications were that merchandising was an activity which the electric utilities would prefer to be done by local dealers, but not at the expense of an over-all successful merchandising job, E.E.I. reported. At the same time, it is apparent that the electric utilities would be willing and ready to assist dealers in every possible way, according to the appliance men.

So far as the immediate future is concerned, one electric utility representative at the meeting stated that his own company had always been a vigorous merchandiser, but that if merchandise is released on a quota basis during the change-over from war to peace-time production, the entire quota in that company's area would be sold through dealers' chan-

(Concluded on Page 4, Column 3)

Condensing Unit Makers, Glutted With Orders, Ask Priority Change

Rating Patterns Becoming Much Confused, WPB Told

CLEVELAND — Because rated orders on the books of condensing unit manufacturers prevent early shipments to customers who now expect prompt deliveries following removal of certain WPB limitation orders, the Refrigeration Condensing Unit Manufacturers Association, which met here recently, has requested WPB to consider certain changes in priorities regulations.

Considerable concern over this situation was expressed at the meeting here, so R. Kennedy Hanson, executive secretary of R.C.U.M.A., sent the following letter to J. A. Krug, chairman of WPB:

"Members of the Refrigeration Condensing Unit Manufacturers Association at a meeting held in Cleveland, Tuesday, June 26, discussed the overall effects of the removal of various limitation and material orders which have controlled the production and distribution of refrigerating compressors and condensing units.

"Frankly, we are disturbed.

"Under Priority Regulations No. 25 and 27, we, as manufacturers, are committed to other producers who use condensing units as components. These other manufacturers have heavy commitments for raw material of various types, and other components such as coils and valves.

"Without the condensing unit they will be unable to complete their assembly for sale to the ultimate consumer, or shipment to the field through their distribution channels. This could well result in great hardship on these producers and delay the reconversion program.

"Further to this, a large majority of the food distribution system has an AA-5 rating for repair and replacement equipment under CMP-5 and 5A. We also find that the field offices in processing WPB-1319's in the past, and presently WPB-541's, have assigned and are assigning AA-5 ratings in the majority of applications for new installations of refrigerated equipment.

"Thus, the food distribution system and other essential installations are on par with spot authorizations under PR-25, which also assigns an AA-5 rating to the condensing unit.

"Under PR-27, manufacturers pro-

(Concluded on Page 32, Column 1)

Poor Refrigeration Is Cause of Potato Loss

NORFOLK, Va.—The importance of proper refrigeration facilities for the preservation of foodstuffs has once more been driven home to government officials in the recent "potato tragedy" here.

The U. S. Army had promised three shiploads of potatoes to Belgiums, to replace potatoes which the Army had requisitioned in that country. The potatoes which were made available were of the type that spoil easily, and the War Shipping Administration was warned of this, and were advised to provide Liberty ships with modern refrigeration equipment.

However, old British ships, with inadequate refrigeration facilities, were sent to Norfolk to load the potatoes.

Potatoes began to spoil when the ship was forced to load slowly, so as not to overtax the refrigeration system. Then, according to reports, the ship started to list badly and the system stopped functioning altogether. It was then decided to pull the potatoes off the boat, with many already spoiled, according to reports.

Group Airs Plans On Sales Terms, Repair Kits

CLEVELAND — Owners of war bonds will hold them until maturity and make most of their postwar purchases on the instalment plan out of income, declared W. Y. Rahan, vice president of the Commercial Credit Corp., in an address before representatives of the nine member companies of the Refrigeration Condensing Unit Manufacturers Association at Hotel Cleveland here recently.

This newly formed group, which comprises of the Product Section of the Refrigeration Equipment Manufacturers Association, completed its organizational structure and discussed industry problems at the Cleveland meeting. B. J. Scholl, sales manager of Brunner Mfg. Co., who served as chairman of the meeting, also appointed several committees for the following year.

In his talk, Mr. Rahan outlined a plan for instalment selling which, he said, has received wide acceptance in the commercial refrigeration field. This plan calls for a minmum down payment of 25% of the contract exclusive of trade-ins and a maximum of 18 monthly payments.

A proposal that repair parts be packaged and properly labeled for protection and quick identification on

(Concluded on Page 29, Column 2)

Service Council Now Dissolved, But Local Groups May Go On

WASHINGTON, D. C.—The National Refrigeration Service Council, which set up a program that trained nearly 10,000 men to do refrigeration service and maintenance work to meet wartime conditions, has been dissolved, it was announced by W. Ray Kromer, Council chairman.

This action does not necessarily mean that the Local Refrigeration Service Councils, which actually carried out the program, will go out of existence. In fact, the resolution by which the National Council was dissolved states that the National group "expresses its hope that local councils will continue to function in whatever capacity they deem necessary to improve local conditions in the refrigeration industry."

Funds remaining in the Council's treasury were voted to be contributed to the Public Relations Program for the refrigeration industry being

(Concluded on Page 29, Column 3)

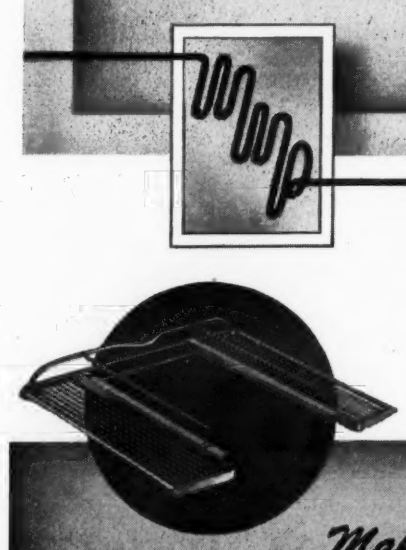
Bendix Home Appliances Promotes 4 Executives

SOUTH BEND, Ind.—Bendix Home Appliances, Inc., manufacturer of domestic laundry equipment, has just announced the elevation of four company executives to the position of vice president.

The men are Harry L. Spencer, vice president in charge of manufacturing; A. R. Constantine, vice president and director of engineering; W. F. Oliver, vice president and chief engineer; and W. J. Reuscher, vice president in charge of finances.

Bendix announced recently its entrance into the home ironer and home dryer fields. Production of the Bendix home laundry for civilian use was resumed July 1, and production on the ironer and dryer will follow as soon as material is available and government regulations will permit, declares Judson S. Sayre, president of the company.

FOR STAINLESS STEEL REFRIGERATOR SHELVES WHY NOT TALK OVER YOUR PROBLEMS WITH THE LEADING MANUFACTURER OF STAINLESS STEEL SHELVES?



WALL WIRE PRODUCTS COMPANY

11333 GENERAL DRIVE
PLYMOUTH, MICHIGAN

Makers of STAINLESS STEEL AND TINNED REFRIGERATOR SHELVES AND WELDED WIRE PRODUCTS

Utilities Show Signs of Dropping Direct Selling Of Appliances For Cooperative Activity

Pent-Up Demands For Goods Decrease Need For Pioneering: REA Selling Looms as Problem

NEW YORK CITY—Postwar merchandising of home electrical appliances is likely to be featured by an increasing tendency among public utility companies to drop direct selling, while continuing intensive cooperative promotions, it is reported here.

Although appliance merchandising by the utilities, primarily anxious to increase their "line loads," remained as a highly controversial issue at the outbreak of the war, several leading companies had modified or abandoned direct selling in favor of cooperative promotional procedures under which retailers and dealers handled the actual orders. Some utilities featured "packaged items" in campaigns which met mixed reaction from dealers, although many participated and welcomed the results.

On their own initiative as well as at the suggestion of retailers, an increasing number of utility companies, including several in the South and Southeast, have now indicated they will leave direct selling of appliances to retailers. Utilities in a number of other sections reportedly are planning similar action.

In New York City, the Consolidated Edison Co. has indicated that in the postwar period it will continue its prewar plan of intensive promotion and cooperation under which dealers and department stores actually handled the orders and received the profits.

It was said that the company plans no special campaigns on "packaged items," comprising several items at a special price, until at least two years after the end of the war. The huge pent-up demand for appliances, it was explained, will eliminate the need for such campaigns in the immediate postwar period.

Although holding that the appliance business logically belongs to them, retailers and dealers concede that the utility companies in the past have done an effective and necessary pioneering job in introducing home appliances to the public. With plans to expand store facilities to handle the anticipated huge postwar demand, retailers now feel, however, that this stage has been passed and that utilities should drop out of the direct merchandising field.

Expressing the view that abandonment generally by the utilities of direct selling would be a "step in the right direction," Lew Hahn, general manager of the National Retail Dry Goods Association, pointed out that retailers have long maintained th the utilities should have a separa accounting system for their app ance merchandising activities, "whi should stand on their own feet a not be charged into their ra structures."

Attention was called by anoth retail quarter to three other phas of appliance merchandising by t utilities: Possible "abuse" of co petition in "packaged items"; deve opment of appliance sales throug government agencies, such as t Rural Electrification Administrati under which the costs of applianc are added to the customer's bill; a the previous practices of some of t utilities in granting extremely lo credit terms of three to five yea for payments on appliances. T latter factor, of course, would governed in the immediate postw period by the Federal Reser Board's Regulation W.

J. F. Lee Joins Graybar In New York District

NEW YORK CITY — J. F. Le formerly manager of the electr range department of Wholesale Rad Equipment Co., has been appointe merchandising manager in metr politan New York and northern Ne Jersey for Graybar Electric Co., In

The Curtain is Rising on the Performance
YOU CAN'T AFFORD TO MISS!
● PEERLESS OF AMERICA is getting ready to announce new products and designs in Refrigeration and Air Conditioning Heat Exchange Equipment. The show you have been waiting for is scheduled for performance, now that restrictions on manufacture have been eased. We are getting ready to release to you details about our new designs and products. This IS the *big show!* Pent-up demand in the market will bring on the *big crowds!*
For this show to be a success we must have your correct mailing address so that we can keep you informed of our new products. To place your name on our mailing list, simply fill out the coupon below and mail today.
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MARION, INDIANA, U. S. A.
Yes, I want a front seat for the show when PEERLESS introduces new products and designs. Please place my name on your mailing list for information concerning them.
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AMERICA

G-E Sets Up Program For Scientific 'Testing' In Hiring Appliance Salesme

NEW YORK CITY—Intending to produce a sales volume in the appliance field four times as great as that realized before the war, General Electric Co. has set up a salesmanship program of aptitude testing, selection, and training that is new in that company's policies.

The program was outlined by Jean DeJen, manager of the retail development and sales education division of G-E's appliance and merchandise department, in an address to the Conference on the Selection of Salesmen, held at the Waldorf-Astoria recently under the sponsorship of the New York chapter of the Society for the Advancement of Management.

A total of 250,000 salesmen will be used in the appliance industry after the war, he estimated, and 25,000 of them will be hired by G-E.

Aptitude testing, the innovational part of the program, will apply only to salesmanship selection. Proper training and supervision will continue to be given fundamental importance, he disclosed. The tests will be graded by an organization specializing in that work. G-E dealers will stand the cost figures of $10 for each salesman.

The scientific selection of salesmen represents a new departure for G-E, Mr. DeJen related. His company reached its present position in the appliance field without the help of such specialized techniques, and "presumably would not be endangered if our dealers were to continue to do without these selection procedures.

"Nevertheless, time and effort inevitably work out better ways doing things," Mr. DeJen went "No company, and no industry, c keep going just on the strength its laurels. Industrial productio has shown what research techniqu can do. Any serious wish for i provement requires giving fair tri to newer ideas.

"Recurrent surveys continue report evidence, he illustrated, th fewer men than ever before are i terested in selling as a postw career." Their reasons are the la of permanency and security. A yet a 15-year study of the produ tive ability of appliance salesm shows that postwar industrial e ployment is going to need four tim as many men as before.

"To recruit a sales force fo times that of any in the history our industry is out of the question he acknowledged. The answer w lie in the kind of a selling job t industry has to offer, he believed.

It must be made a more profitab enterprise, for one thing. No job degrading, he said—but what m can find dignity or satisfaction a poorly paid profession? "A m with selling ability, given go merchandise and a heart-warmi chance for profits, may be t answer to this postwar selling job.

The salesman is the indispensab man in this country's plan for po war employment, Mr. DeJen point out in conclusion. Manufacturi and distribution alike are depende on his efforts. It is up to the indu try to make the salesman feel th the job is worth doing.

WHERE EVERY SERVICE MAN LOOKS FIRST FOR
REFRIGERATION
PARTS & SUPPLIES
WRITE FOR CATALOG
THE HARRY ALTER CO.
1728 S. Michigan Ave. Chicago, 16, Ill.
Two Big Warehouses to Serve You
134 Lafayette St. New York, 13, N.Y.

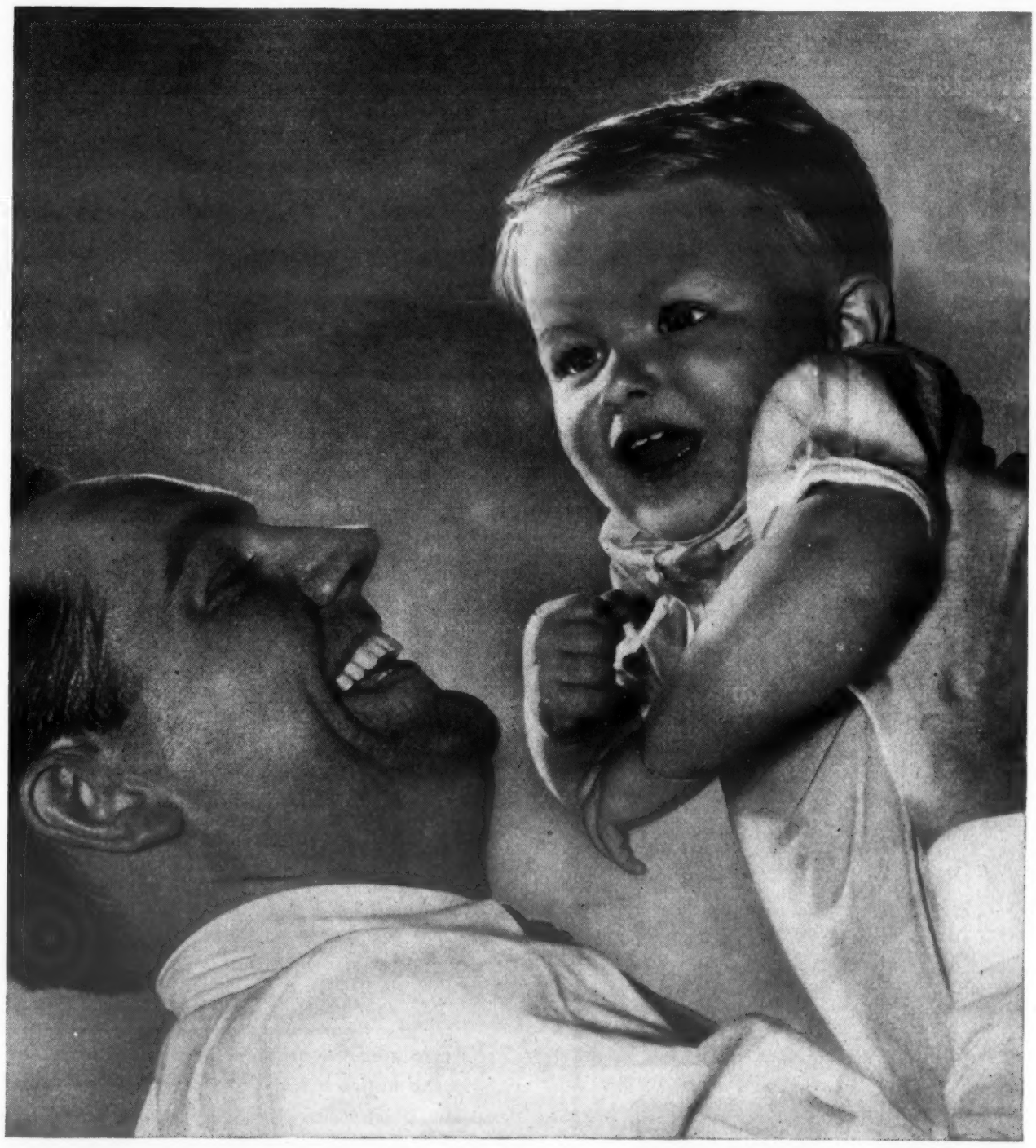
What are You working for?

It's more than just living from day to day.

It's security and a better life for you and your family . . . an education and a sound future for your children . . . a business you can *build* with your heart and hands . . . a respected place in your community.

***These* are the things you're working for . . . whether an individual or a business organization.**

And these are the reasons why the Kelvinator Franchise is a valued possession to that forward-looking group of men and organizations that hold it.



For that franchise means a *future* . . . a *better* business life . . . protection against the vicious competitive selling practices arising from too many dealers, too many models, too few sales per retailer. It means a sounder business opportunity for the long pull.

That franchise means a higher standard of business and human relations because *the basis of Kelvinator's "Retail-Minded" thinking is that no sale has been completed until the product leaves the retailer's floor!* Every detail of Kelvinator's way of doing business supports this policy . . .

More Sales per Dealer—Yes, *more* sales per dealer because the Kelvinator *selective* distribution pattern . . . based upon *not* the most but the *finest* dealers . . . plans a market adequate to insure enduring, profitable returns on investments of time, money and effort.

Simplified Product Policies—A line of products so simplified and compact as to reduce retailers' investments in inventory. The Kelvinator line is confined to high-unit-of-sale, big volume products.

Competitive Price Policy—Kelvinator's aim will always be to maintain a price policy that is vigorously competitive . . . with higher units of sale assured by a proven step-up plan dramatizing visible, salable values at each step.

Retail-Minded Merchandising—Designed for *action*, Kelvinator advertising, sales promotion and sales training have one purpose—to move merchandise *off* the retailer's floor.

This is the meaning of "Retail-Minded" Kelvinator . . . a *better* way of business that gives you the things *you* are working for!

The most Valuable Franchise in the Appliance Industry

LOOK AHEAD WITH

RETAIL-MINDED

Kelvinator

DIVISION OF NASH-KELVINATOR CORPORATION

Kenosha · Milwaukee · DETROIT · Grand Rapids · Lansing

Nash-Kelvinator's hit musical program Sundays 4:30 P. M., E. W. T. American Broadcasting Company.

New

M&E

Unit Coolers

(IMPROVEMENT NO. 2)

CONTROLLED AIR FLOW

No air blasts to cause excessive dehydration.

THE PEAK OF REFRIGERATION

MERCHANT & EVANS CO.

2035 WASHINGTON AVENUE, PHILA. 46, PA.

PIONEER MANUFACTURERS OF FIN-TUBE PRODUCTS

CHRYSLER AIRTEMP

Merchandising— That Helps Dealers Sell

Chrysler Airtemp backs up the dealer with a complete merchandising program to help him sell. Continuous advertising campaigns keep the Airtemp name before the public. Display and promotional material, cooperative newspaper and publicity programs; a special service plan; a finance plan; customer relations ideas; factory sales and installation training courses help to complete the package. Sell the "Packaged" line backed by a "Packaged" Merchandising Program! Chrysler Airtemp pioneered "Packaged" Air Conditioners and the Combination Heating and Cooling System for the home. Chrysler Airtemp builds a complete line of smartly styled, soundly engineered heating equipment—warm air, hot water and steam, using all types of fuel, and priced to meet the needs of even modest budgets.

The Chrysler Airtemp Triple Line . . . Heating, Cooling, and Commercial Refrigeration . . . offers dealers an unusual opportunity for 12 months' profitable operation. Dealer agreements will be available for any single Chrysler Airtemp Line . . . any two lines . . . or for all three lines. • Airtemp Division, Chrysler Corporation, Dayton 1, Ohio.

THE TRIPLE LINE

THE 4 FUNDAMENTALS of CHRYSLER AIRTEMP DEALER OPERATIONS

1. Engineered Installation
2. Proper Display
3. Outside Selling
4. Customer Service

Buy More War Bonds! You'll enjoy "The Music of Morton Gould," Thursdays, CBS., 9 p. m., E. W. T.

HEATING • COOLING • REFRIGERATION

Utility Selling--

(Concluded from Page 1, Column 3)

nels so far as that company is concerned.

Aggressive competition can be expected from gas companies who are said to be planning a vigorous utility merchandising effort on gas appliances when the war ends, it was emphasized at the meeting.

Merchandising trends in the electrical appliance field were considered by those at the joint meeting as a subject requiring much attention by the industry at the present time. Oil companies, for example, will be a factor, as will factory-operated branches in certain areas, it was said.

RELY ON DISTRIBUTORS

While in a few instances before the war national chains took over the distribution of electrical appliances to their own retail outlets, wholesale distributors seem to be relied upon to a large degree by manufacturers as the most desirable means for distribution of their products, it was indicated.

That practice exists because the wholesale distributor does the most economical job of moving the goods from the factory to the consumer, and only when he no longer does so will some other method of distribution replace him, declared Herbert Metz of Graybar Electric Co., New York City, and chairman of the N.E.W.A. planning committee.

The suggestion that in metropolitan markets the wholesale distributor might not be able to compete with factory branch distributors was challenged by appliance men present, who cited 1939 reports of the Bureau of Census which gave wholesale distributors a lower cost of operation than the factory branch distributor.

LOCAL CHAIN COMPETITION

Competition from chain stores in local markets, however, will be serious in the postwar period, if opinions of those at the meeting prove valid. This condition indicates a definite need for cooperation with independent retailers in the practical form of store and window display advertisements, consultation and advice on window modernization, and the availability of adequate sales training and window management guidance, according to wholesalers at the meeting.

Such assistance, it was said, will be necessary especially for specialty sales dealers, but it is important also to the handling of goods of wide public acceptance in the traffic and major appliance fields. The electric utilities could greatly assist in that type of dealer cooperation, it was suggested.

Training of new sales personnel came up for considerable discussion at the meeting, with the revelation that the E.E.I. and N.E.W.A. plans for basic sales training seem to overlap. It was suggested that in view of the similarity of objectives and of the material for sales training now being prepared by both associations, it would be advisable for representatives of the two groups to confer on the possibility of cooperating in this program.

The sales training program of both associations, it was emphasized, will offer essentially objective "basic" sales training rather than product or any other specialized training.

To be most effective, basic training of sales personnel should be handled through local central agencies, such as electrical leagues, sales groups, or other local organizations which logically have the ability and facilities for this purpose, according to R. J. Brown (N.E.W.A.) of General Electric Supply Corp., New York City.

SELLING AS PROFESSION

While it is important that attention be given to the proper selection and training of salesmen, not enough thought is being devoted to the idea of selling "selling" as an important profession, suggested P. H. Powers (E.E.I.), vice president of West Penn Power Co., Pittsburgh.

This was strongly supported by Mr. Metz, who said that for the past 10 years he had been writing articles and making speeches across the country on this subject. Interest in selling as a profession has been reawakened recently, said Mr. Metz, who added that this problem was, to his mind, the most important facing American business.

He further gave some personal experiences to indicate how little interest there is among the men in the armed forces and in the colleges in entering the sales field, and expressed the hope that American business in general would not only take an interest in this subject but would do something about it.

ATTRACTING RIGHT PEOPLE

The problem of attracting the proper kind of personnel to the electrical industry has been weighed very carefully, and that its importance is recognized and the subject included in the "Suggested Veteran's Reemployment Program" developed by the appliance division of N.E.W.A., said R. C. Hill, director of N.E.W.A.'s appliance division.

N.E.W.A.'s plan includes the use of a brochure which would be created at the local level, setting forth the electrical industry's overall war effort and the opportunities that will exist in the postwar period, explained Mr. Hill.

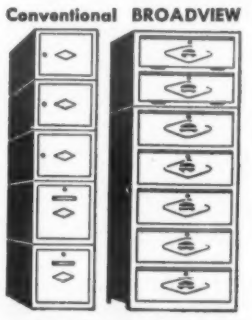
The brochure, Mr. Hill added, could well include opportunities offered in sales work and could be so prepared as to attract the type of personnel which, it was evident in the discussion at the meeting, will be needed by the electrical appliance industry in competition for its portion of the consumer's dollar.

New! The BROADVIEW

Safe-Way's Sensational

WIDE-DESIGN LOCKER

"Acclaimed the greatest single advancement in the entire history of the locker industry."



Compare the BROADVIEW

(Completely assembled 5 drawer, 2 Door Tier)

- Years ahead—in beauty, utility, construction!
- Exclusive Wide Design—increases yearly rental 50% per tier.
- Greater Capacity—with contents entirely accessible.
- Completely assembled—no high costs for assembly.
- Priced the same as other conventional models.

See the wonderful new BROADVIEW Locker on Display at your dealer's today. Plan *now* to offer your patrons its many extra advantages. With the BROADVIEW wide-design Locker in your plant you are assured of the *preferred* business in your community.

FOR IMMEDIATE SHIPMENT . . .

Write Us Today for Name of Your Nearest Dealer!

SAFE-WAY

SAFE-WAY FOOD LOCKER COMPANY

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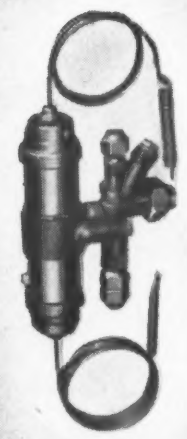
"DETROIT" EXPANSION VALVES Do a Better Job

Dura-fram Automatic Expansion Valves are made in various capacities for domestic or other small boxes. Dura-fram diaphragms and Delubaloy needles and seats assure long trouble-free operation.

No. 899 New Dura-fram Thermostatic Expansion Valves for commercial installations. Furnished with external or internal equalizer and forged union connection.

No. 673 Thermostatic Expansion Valve. For many years the standard of the refrigeration industry.



No. 793 Differential Temperature Expansion Valve specially designed for temperatures below minus 30° F.

Drying the Evaporator and Refrigerant Lines with Heated Dry Air

No. 4 of a Series

When a refrigeration system is too big to dry by placing in an oven—when circumstances do not permit heating it by means of radiant lamps for the heat and vacuum drying process, and when there is more moisture than can be taken out by a cartridge dryer, it may be dried effectively by use of heated dry air.

Hot air, or any other inert gas, such as nitrogen or carbon dioxide has the capacity to hold water as a vapor, and this capacity increases with temperature increase. Air is said to be saturated when it cannot evaporate any more water. For example air at -25° F. and at atmospheric pressure is saturated when it contains .0001968 pounds of water per pound of dry air. At 200° F. this pound of dry air will hold 2.261 pounds of water as vapor.

The coil and tubing may be dried by putting enough hot dry air through them. There are two ways—by the "pull through" and by the "pressure" methods.

The pull through method is a variation of the vacuum drying method, except that the heat comes from the air, instead of from heat lamps, or an oven. It has the advantage of making the heat available to all parts.

A diagram of a typical pull through setup is shown in Fig. 1. A vacuum pump is connected to one end and an

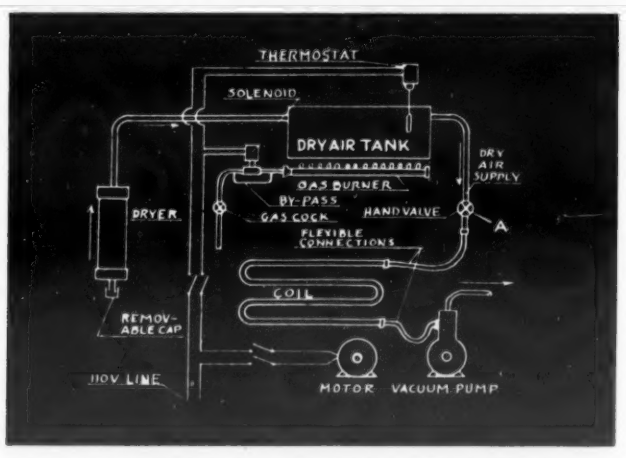


FIG. 1—DEHYDRATING SYSTEM USING VACUUM METHOD

air tank to the other end of the coil to be dried. A gas burner is used to heat the air tank. This setup shows a thermostatic control for the gas burner.

The intake of the dry air tank is through a cartridge dryer. Anhydrous calcium chloride is a good drying material to use. It is recommended that the cartridge be mounted so the incoming air travels upward. This prevents carrying calcium chloride or water into the parts. A vacuum can be drawn by closing valve A. In the process of drying, heated air from the dry air tank is drawn through the system until the system is warm throughout. Then the valve is closed, and a vacuum is drawn with the vacuum pump. From time to time additional hot dry air is drawn into the system, and the process is continued until drying is complete. Obtain safe maximum temperature from coil manufacture; otherwise do not exceed 175° F.

A diagram of a typical "pressure" setup is shown in Fig. 2. The tank here must be air tight, and tested to twice the pressure it is desired to use for drying. It should be equipped with a relief or safety valve set to pop at about 10% above the working pressure. A drain should be placed on the bottom of the pressure tank for removal of any water or oil which may be carried over from the compressor. Obtain safe working pressure from coil manufacture; otherwise, do not exceed 50 p.s.i. In this setup,

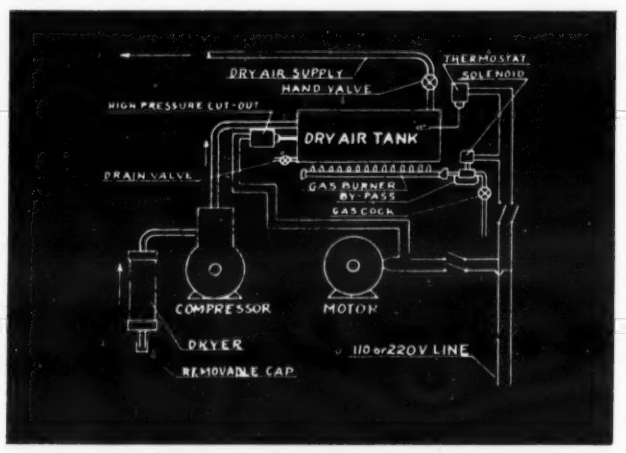


FIG. 2—PRESSURE TYPE DEHYDRATING EQUIPMENT

the motor drives a compressor which pumps dry air into the tank where it is heated by a thermostatically controlled gas burner. Obtain safe maximum temperature from coil manufacture; otherwise, do not exceed 175° F.

The compressor draws air through a calcium chloride cartridge so that it is as dry as possible when introduced into the tank. The pump should be controlled by a pressure switch actuated by tank pressure and adjusted to hold the pressure within proper limits.

In this system of drying, hot dry air is blown through the coil and tubing until the desired result is obtained. Much of the moisture in a system is likely to be trapped under an oil film. In both of these drying methods the heat, lowering the viscosity of the oil film, permits the trapped moisture to escape.

Either of these drying devices may be assembled on the job, or may be arranged as a permanent drying rig, on a suitable mounting, so it may be easily moved to the job, and put to work as soon as the necessary connections are made.

Once the system is thoroughly dry, it must be sealed immediately so that moisture cannot find entry again.

NOTE: When using either of the above methods of drying, the expansion valve should be removed from the line.

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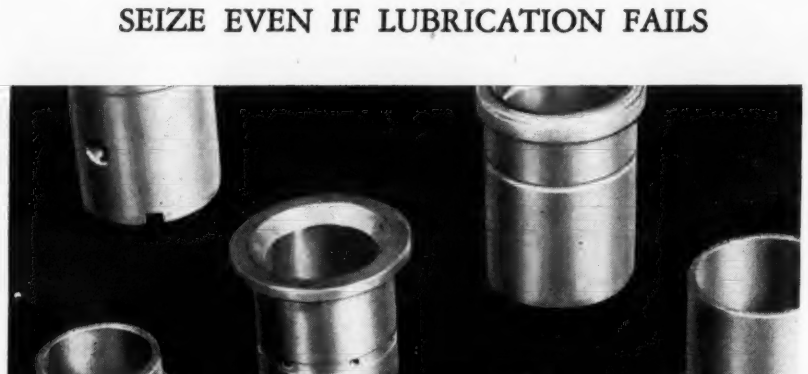

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American Sales New Columbus Distributor

COLUMBUS, Ohio — American Sales & Distributors, Inc., a new distributorship located at 33 Grubb St. here, with a branch located at 400 Linden Ave., Dayton, was recently incorporated by former stockholders of the American Sales Co.

Officers of the new corporation are: A. Goldenberg, president; E. C. Brauning, vice president and general manager; T. E. Goldenberg, vice president; E. P. Mercer, treasurer; Glenn Jones, secretary; and K. G. Brecht, Dayton manager.

Among the lines intended for distribution at wholesale in approximately 40 counties in central and southern Ohio are: Bendix radio, American Central sinks and kitchen cabinets, Thor washers and Glad irons, Westinghouse traffic appliances and fans, Westinghouse Mazda lamps, and other lines to be announced later.

The company was incorporated with a paid in capital of $125,000 cash assets.

Rumbaugh To Work on Goodrich Appliance Plans

AKRON, Ohio — Hugh M. Rumbaugh, formerly in appliance merchandising with the Joseph Horne Co., Pittsburgh, and recently a civilian instructor in radio with the U. S. Army Signal Corps, has joined the auto and home supplies department of the B. F. Goodrich Co. here to work on a merchandising program for major appliances.

Will Home Freezer Design Allow It To Go Down Cellar Stairs?

By C. Dale Mericle

DAYTON, Ohio — "Home freezers may look swell on the drafting board, but they'll look like hell stuck in a basement stairway," warns E. George Sanders, president of Morton Showcase Co., said to be one of Ohio's largest distributors of store fixtures.

Last year this firm, which operates branches in Columbus and Springfield, Ohio, and is opening another in Lima, Ohio, added home and farm freezers to its line, selling $85,000 worth in 1944, and has already chalked up more than $150,000 sales in this line so far this year, according to Mr. Sanders.

One of the big problems in home freezers is designing them narrow enough to go through doors, but especially narrow enough to make the turn that is usually encountered in basement stairs, declared Mr. Sanders.

"The dreamer pictures the home freezer in the kitchen, but he'd better find out where to put the baby's high chair," he emphasized. "And people aren't going to put the high chair in the basement."

Cabinet width of home freezers should not run to the usual 29 in. or 30 in., but should be held between 26 in. and 28 in., according to Mr. Sanders, who added that a recent survey shows that cabinets of 10 to 15-cu. ft. capacity account for 90% of sales volume.

Mr. Sanders organized his firm in Dayton in 1939, after spending some 30 years as a "wandering fixture man," working in the store fixture field all over the country, he said. Starting with a capital investment of $800, Mr. Sanders developed the operation to the point where this year he expects the sales volume to top $1,500,000.

One reason for the success of the firm, he says, is the extensive advertising and promotion program, unusual for a store fixture company. Devoting 3% of gross sales for advertising, Morton Showcase Co. runs advertisements in 32 daily and weekly newspapers, and sends out 15,000 pieces of direct mail every month. Two thirds of the advertising budget is devoted to newspapers.

Another important factor is keeping a big warehouse stock for quick deliveries, says Mr. Sanders. The Morton company always carries three carloads of walk-in coolers in stock, for example, and two carloads of upholstered booths for bars and restaurants.

During the war, when materials have been hard to obtain, the Morton company has sent its salesmen out with plenty of cash to buy up fixtures to meet customers' needs, according to Mr. Sanders.

Originally the company distributed only the commercial cabinets manufactured by Morton Show Cases, Inc., of Washington Court House, Ohio, but several other lines have since been added. These include Sherer-Gillett, United Refrigerator, Schaefer. Recently the firm was appointed Tyler distributor in 40 Ohio counties.

Still another important factor in the firm's success, believes Mr. Sanders, is the employment of older men, especially as salesmen. Sales manager of the company is Fred Brachey, who is 65, while the top salesman is Edd Herrmann, 76. Mr. Sanders says he operates on the theory that when a man has reached the age of 50, he ought to be ready to settle down and really go to work.

Prices Set on Two G-E Replacement Models

WASHINGTON, D. C.—Maximum prices on two additional models of General Electric Co. "Monitor Top" replacement refrigerating units have been established by OPA.

On factory sales to distributors ceiling price on Model FCA-1 is set at $52.26; Model FCA-2, $58.94. Distributor's price to dealers is established at $57.85 for FCA-1, and $65.36 for FCA-2. Dealer to consumer ceilings are $77 for FCA-1 and $87 for FCA-2.

These prices include installation of the unit in the refrigerator of the consumer and the Federal excise tax. When the dealer installs either of these units and also installs adaptor parts, he is permitted to charge $1 in addition to the maximum prices, OPA has ruled.

POSTWAR COMMERCIAL REFRIGERATION:
If your postwar refrigeration equipment is to be so reliable that one installation leads to the sale of another, you must have a compressor unit that "can take it"—an ability demonstrated by Williams Ice-O-Matic for more than 20 years. Before you buy your unit, write for information about Ice-O-Matic.

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Learn how much features like Ice-O-Matic's *exclusive oil rectifier* and *positive pressure-type lubrication* will mean to you. Ice-O-Matic units in ¼ to 5 h.p. capacities for all temperature requirements will be available once we receive our "honorable discharge" from Uncle Sam. In the meantime, we invite inquiries. WILLIAMS OIL-O-MATIC DIVISION, Eureka Vacuum Cleaner Company, Bloomington, Ill.

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For continued excellence in producing tough-to-build war equipment, Williams employees have *four times* received the Army-Navy Award, as well as the USAAF "Approved Quality Control Rating."

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Throughout the world Torrington air impellers in unit coolers distribute cooled air evenly and in the proper amount 24 hours a day, day after day. Used in many types of refrigerating equipment, every cut of meat is kept in perfect condition.

Both the Standard and the P Series fan which is pictured at left, are popular for refrigeration applications. They are two of the many Torrington air impellers behind the scenes of modern living, quietly, dependably delivering an adequate air supply.

Whatever your product requiring an air impeller, let us help you select the proper one while your unit is still *in the early stages of design*. That's when we can help you most. Write for an Air Impeller Specification Sheet.

THE TORRINGTON
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$70 Million Parts Market Forecast

MARINETTE, Wis. — In addition to the huge demand for new mechanical refrigeration and air conditioning equipment after the war, American business, commercial, and industrial establishments will spend millions of dollars for repair, modernization, and expansion of existing equipment.

More than $70,000,000 in new parts will be required, and to that sum will be added many millions in labor and engineering services, most of which will be supplied by the nation's refrigeration and air conditioning service firms.

This information was disclosed by F. J. Hood, newly elected president of the Refrigeration Equipment Manufacturers Association, who based his $70,000,000 estimate on a recent report of the organization by H. T. McDermott, secretary of the Refrigeration Service Engineers Society.

As an example of the existing situation in major industries, Mr. Hood pointed out that over half the refrigerating equipment used by the meat industry is 15 years old or more. This means, he said, that a large percentage either is badly in need of repair or should be replaced as soon as possible.

Cleveland Radiolectric Appoints 2 To Staff

CLEVELAND — Appointment of Myron O. Burneson as manager of the Victor record department and the promotion of Dean W. Gunter to sales promotion and advertising manager of Cleveland Radiolectric, Inc., was announced by Charles C. Conrad, company president.

'Packice' Machines Installed on Okinawa Make It Possible To Carry Whole Blood To Front Lines

By W. H. Knowlton, American Red Cross

OKINAWA INVASION FRONT—One of the most amazing sights I have encountered to date on the embattled island of Okinawa is a Vilter "Packice" Machine in full operation, located at a U. S. Navy Whole Blood Distributing Center on one of the invasion beaches. The sight of a bin full of white ice crystals caused me to have romantic dreams of ice cream, of sparkling Coca Cola, and cold beer. So far all we have located is the ice.

The Vilter "Packice" machine was erected by a contingent of Seabees, who added a suitable installation to cool the 3-hp. "Freon" compressor. Power is supplied from a Kohler 15 KW generator located nearby. Included in the same installation are two Hussmann-Ligonier reefer boxes, equipped with gasoline driven air-cooled compressors, used for storing the whole blood.

The "Packice" machine is operated 24 hours a day, and the ice is used to fill insulated containers which carry 16 pints of blood. The insulated boxes are then carried by trucks to hospitals all over the island.

The Navy installation is in charge of Lt. L. P. Kirkland of San Diego, Calif. and Lt. (j. g.) S. L. Larson of Akron, Ohio. Care and operation of the refrigeration equipment falls to Fireman 1/C Glen De Lozier of Tulsa, Okla. De Lozier states that the equipment is giving very fine service, in spite of the clouds of dust that rise from roaring military vehicles covering everything.

The important installation is still in American hands, despite the fact that it is located not far from where the Japs made an amphibious counter landing the previous night. Lt. Larson did not show the slightest concern, saying, "the Marines took care of them in a hurry."

I plan to visit this refrigeration set-up again, the day the first can of beer appears on Okinawa, but with the bitter fighting going on here now we are content to wait for any "unnecessary" supplies in favor of the more vital implements of war.

Birmingham R.S.E.S. Chapter Gets Charter

BIRMINGHAM, Ala.—Birmingham Chapter of the Refrigeration Service Engineers Society has received its charter, presentation being made by E. A. Summer, Baton Rouge.

The committee in charge of the dinner was composed of Floyd Corbin, E. D. Gothberg, George D. Maske, and W. C. Kent. C. S. Tucker is acting secretary.

Temporary officers of the Chapter are Floyd Corbin, president; W. C. Kent, vice president; C. S. Tucker, secretary; and W. E. Hereford, treasurer.

New Contracting Firm

LOS ANGELES — Refrigeration Contracting Co. is the firm name under which L. E. Griffin has published a certificate that he is conducting business at 2219 South La Brea Ave., Los Angeles.

68% of Farmers Surveyed Will Buy Appliances

PHILADELPHIA—Of 2,300 rural families in 320 counties in 44 states, 68% expect to buy household appliances, when available, at an average expenditure of $271 per family.

This is one of the facts reported by the Curtis Publishing Co., which just completed a survey of the post-war intentions of farmers for *The Country Gentleman*.

With the lifting of war time restrictions, many farmers plan to build new homes and repair and refurnish old ones. They are also planning to build tenant houses, barns, and fences. An overwhelming proportion of this construction will be paid for in cash.

Of the farmers interviewed, 16.6% expect to build new homes. Two thirds of these farmers have already set aside funds for this purpose.

Furniture and home furnishings will be bought by 49.9% of these farmers, at an average expenditure of $255.

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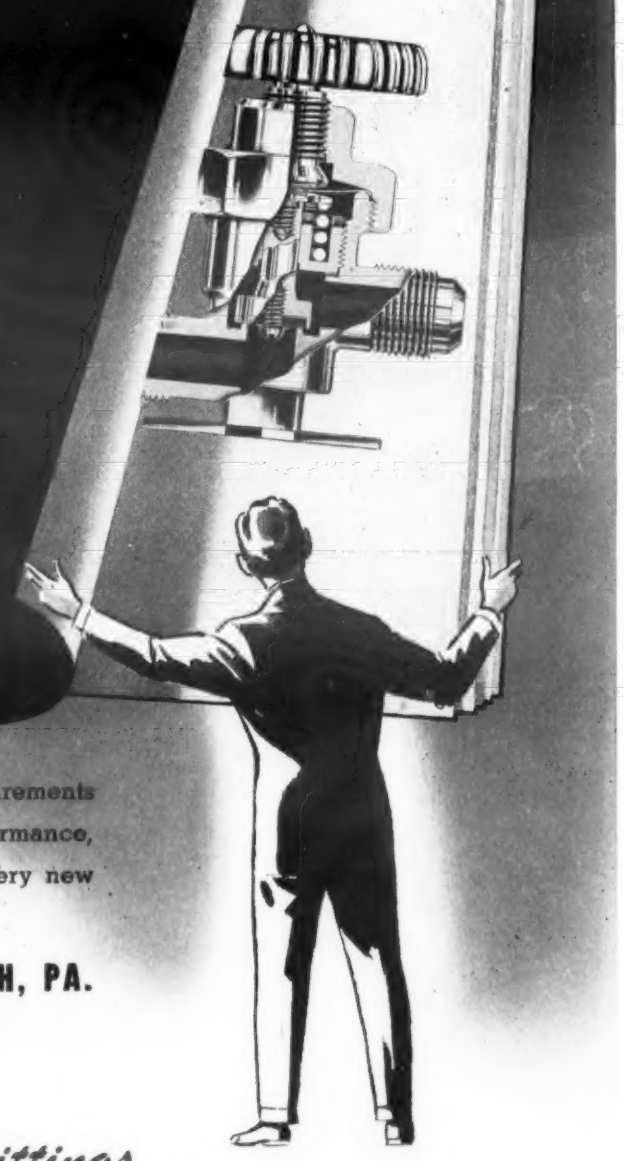
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Navy Launches Fully Air Conditioned Hospital Ship For Service In Pacific

BROOKLYN—The U. S. Navy's first completely air conditioned ship, a hospital ship named the *U. S. S. Tranquillity*, will shortly go into service in the Pacific area. Five other vessels of the same type will soon be acquired by the Navy.

Converted from Maritime Commission C-4 hulls, the 15,000-ton ships carry hospital beds for 802 patients, including 742 enlisted men and 60 officers. Several hundred more cases could be carried in an emergency, it is said.

Hospital areas as well as quarters for the staff and crew totaling nearly 600 persons are air conditioned by Carrier equipment. The hospital area includes operating rooms and surgical wards, ambulatory wards, and rooms for specialized care such as the eye, nose, and throat wards as well as the patients' quarters.

Additional refrigeration equipment is employed for storage of food, biologicals, ice makers, and ice cream makers.

The total refrigerated storage space amounts to 21,815 cu. ft. with temperatures ranging from 15° F. to 40° F.

There are separate compartments for meats, vegetables, fruits, and dairy products. Two ice makers on each ship have a combined capacity of 1,200 pounds of ice daily. Special diet kitchens have their own refrigerated storage rooms.

The ships were constructed as C-4's by the Sun Shipbuilding & Dry Dock Co., Chester, Pa., and taken over by the Navy for conversion. Length of the seven-deck, turbine-driven ships is 520 feet, with a beam of 71 feet, 6 inches. Cruising radius is about 12,000 miles.

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Production Rules Off For Electric Fans

WASHINGTON, D. C. — Unrestricted production of electric fans without priorities assistance for the acquisition of materials, as well as limited production with priorities assistance, is now permitted through the "open-ending" amendment of Limitation Order L-176, governing production of electric fans, WPB reported July 3.

This action does not mean that fans will be available for home or office use, WPB said. Restrictions on distribution of new electric fans remain in effect and apply to all fans, whether made with or without priorities assistance.

As before, manufacturers may deliver marine fans for shipboard use to the armed services without special authorization. They may also deliver any type of electric fan to other manufacturers without special authorization. Delivery of fans for hospitals, institutional, and essential industrial purposes and of shore type fans for military purposes remains subject to authorization on Form WPB 1319.

The previously approved quarterly programs for the production of 25,000 electric fans will remain in effect in the third quarter of 1945. As before, WPB will grant priorities to authorized manufacturers.

The amended order permits production of fans in excess of this amount to the extent that materials are available without priorities assistance.

Going Strong

Veteran Air Conditioning Dealer Weathers War Years with More Profits Than Prewar

By C. Dale Mericle

BUFFALO—With more work in process now than at any time since 1922, the Cooney Co. here is looking to the postwar era with considerable interest, as contrasted to the rather bleak outlet of those days in 1942 when the government "freeze" on air conditioning and refrigeration went into effect, declares Edwin R. Cooney, owner of this veteran Carrier distributorship.

Despite the many wartime problems such as lack of materials, and despite a drop of some $30,000 a month in sales, Cooney Co. actually increased its profits in the past three years, revealed Mr. Cooney.

"We formerly did $30,000 to $50,000 a month business, but following a reorganization of our company, and with such changes in our operations as eliminating much of the expense connected with sales and servicing, we found it more profitable with only $10,000 monthly business," he admitted.

A highly important factor in keeping the firm going strong during the war years, said Mr. Cooney, was a slight departure from conventional refrigeration and air conditioning work; the installation of air filters on oil burners heating annealing furnaces in foundries.

The first job was installed in a foundry built in Buffalo by the Defense Plant Corp. for Pratt-Letchworth, Inc. back in November, 1942, according to Mr. Cooney.

"We had installed Carrier diffusing equipment and had been invited to be on hand when operations in the foundry were started. Foundries, of course, are well known for having lots of dust. Soon the foundry was having trouble with the oil burners' clogging up and stopping, which was not good, to put it mildly, for annealing armor plate. Under these conditions armor plate would not pass inspection.

"The management turned to me to inquire what might be done about it, and after studying the problem I decided to try installing an air filter on the centrifugal blower supplying the oil burner," recalled Mr. Cooney.

Out of sheet metal the Cooney Co. made up a frame, one end of which was designed to fit on the circular flange at the intake of the centrifugal blower, with the other end equipped to take a 25 by 20 in. "Air-Maze" type air filter, Mr. Cooney said.

So successful was this installation that the Cooney Co. was soon making and installing these filter attachments for other foundries in Buffalo and elsewhere. In addition to Pratt-Letchworth, Inc., such steel plants as Republic, Symington-Gould, Depew, and Allegheny-Ludlum soon had Cooney Co. at work on this problem.

Formerly known as Cooney Refrigeration Co., the firm took the name of Cooney Co. when it was reorganized in 1942, Mr. Cooney said. Outside interests decided to step out of the picture at that time, so the former firm was liquidated and the new one established, with Mr. Cooney in charge. A brother, James Cooney, manages the firm's branch located in Syracuse, N. Y., recently augmented by the return of William Gilboy.

Mr. Cooney has been active in refrigeration and air conditioning in New York state since 1919, and was instrumental in organizing the Cooney Refrigeration Co. in 1929 as state distributor for Brunswick-Kroeschell. In January, 1934, the company was franchised as Carrier distributor.

NO TEAKETTLE PROPOSITION!

AS LONG AS there have been teakettles there has been "air conditioning." Of course, it wasn't called that! But it *was* air conditioning in a crude form . . . provided by steam escaping into the room.

In winter especially, air contains little moisture . . . and indoor heat makes it even drier. So moisture is needed, and when this is added one of the basic elements of air conditioning is at work.

But *modern* air conditioning is "no teakettle proposition." There are many other considerations.

The air must be cooled or heated. Moisture must be added or removed. The air must be cleaned . . . and distributed gently and evenly.

That may sound simple . . . but it isn't. The process is complex and difficult. And it calls for top-flight engineering skill.

That is why the Carrier organization has devoted itself to the single task of bringing you the finest in air conditioning and refrigeration. And this singleness of purpose has prevailed for more than forty years . . . ever since Dr. Willis H. Carrier founded the air conditioning industry.

The result is leadership. And because of this leadership thousands of manufacturers, merchants and home owners are looking to Carrier to solve their air conditioning problems . . . once wartime responsibilities have been discharged.

This immense peacetime market represents a ready-made opportunity for Carrier dealers—a source of continued sales and assured profits.

CARRIER CORPORATION, SYRACUSE, N.Y.

Carrier

AIR CONDITIONING • REFRIGERATION

Wac Major Cites Need For Air Conditioning Of Pacific Hospitals

WASHINGTON, D. C. — "I hope the lesson learned concerning the value of air conditioned hospitals and nurses' quarters in abnormally hot climates around the Persian Gulf will be carried out in the Pacific theater," stated WAC Maj. Margaret D. Craighill at a press conference in the Pentagon building following her 56,000 mile inspection tour of the facilities for members of the Women's Army Corps and the Army Nurse Corps.

"Army women stood their second summer on the Persian Gulf much better than the first. Air conditioning was the greatest boon and reduced fatigue enormously," continued Maj. Craighill.

A new psychological approach also aided in this realization of comfort. When the women found out that the heat was not much worse than Washington, they forgot about their emergency teams for heat exhaustion, learned to take long siestas, frequent drinks from fluid carts, and salt tablets, she stated.

As a result of her health inspection, Mr. Craighill declared that fears about what either cold or tropic climates might do to American women were unfounded, and that their health has been much better than had been expected.

Women on the whole have done better than the men from a health point of view, probably due to the fact that they have received a better "break" in living conditions.

Two years overseas duty in difficult climates was the maximum for women set by Maj. Craighill. Also, women over 35 should not go overseas except in special cases, she emphasized.

Idaho Farmers Want Both Lockers and Freezers

MOSCOW, Ida. — Both additional central locker plants and home freezer units are wanted by Idaho farmers, according to the findings of a survey conducted by the department of agricultural engineering of the University of Idaho College of Agriculture and the Idaho Committee on the Relation of Electricity to Agriculture.

Hobart Beresford, department head, announced (June 28) that 75% of about 2,000 replies to the survey questionnaire indicated that Idaho farm families are now using commercial frozen storage lockers. On the basis of this figure, he estimated that about one half of the 40,000 lockers available in Idaho are used by farm folk.

"These locker plants are widely distributed throughout the state," he pointed out. "Transportation, however, is a controlling factor in many areas. The greatest distance traveled to a locker plant was reported as 85 miles. There are a number of communities that need central locker plants and as materials and labor become available these undoubtedly will be built."

Although Idaho farmers already are extensive users of frozen locker facilities there is a great desire to possess individual farm units, according to Mr. Beresford, who reported that at present only 1% of the farms now have freezer units.

"Sixty-one per cent of those replying to the questionnaire," he disclosed, "plan to get farm freezers in the future. Eighty-five per cent of the replies indicate that farmers would continue to use central locker plant service in addition to their new home units, especially for meats."

The survey indicated that a 25 to 50-cu. ft. farm freezer would be satisfactory for 52% of the requirements on Idaho farms. The remaining group was divided about equally between the 75 to 100-cu. ft. combination types and the 200 to 300-cu. ft. walk-in types.

Taylor Elected V.P. of G-E Credit Corp.; Miller Heads Service

NEW YORK CITY—L. H. Taylor has been elected vice president of the General Electric Credit Corp. by its board of directors, according to an announcement by President G. F. Mosher.

Prior to his appointment Mr. Taylor was manager of the product service division of G.E.'s appliance and merchandise department in Bridgeport, Conn., with responsibility for the development and extension of the company's national chain of factory-operated appliance service centers.

Mr. Taylor, a graduate of Lafayette College, has been associated with General Electric since 1925 and was on the company's traveling auditors staff for six years, four years of which were spent abroad. He joined the appliance and merchandise department in 1938 as assistant manager of credits and collections. In 1940 he was appointed assistant to the sales manager, and after the outbreak of war was engaged in special work in connection with contacts covering certain equipment produced by General Electric for the Navy.

John H. Miller has been appointed to Mr. Taylor's former position as manager of the product service division.

Mr. Miller graduated from Butler university. He joined G.E. at Schenectady in 1929 and, in 1935, was appointed as a traveling auditor. He moved to Bridgeport in 1941, where he was accountant of the traffic appliance division.

New Container Speeds Frozen Food Packaging

NEW YORK CITY—New frozen food package designed for high speed, economical use in frozen food plants is announced by the American Can Co.

Requiring no inner or outer wrappers, the new container is a single, semi-rigid unit, resembling in shape the conventional frozen food package. It has a wall of paraffin-impregnated fibre board with ends of light tin plate.

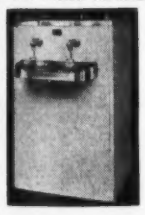
The container, which is now being tested in a number of frozen food plants, can be handled "at speeds up to 200 per minute, as compared with speeds ranging from 30 to 80 per minute for most of the present frozen food packages," it is stated.

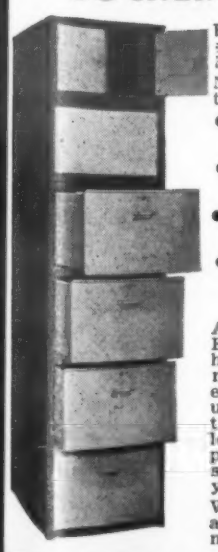
Rising Joins Crosley Calif. Distributor

SAN FRANCISCO — Appointment of Edward J. Rising, as manager of appliance and radio division of the California Electric Supply Co. of San Francisco, distributor of Crosley radio receivers and major household appliances in northern California, has just been announced.

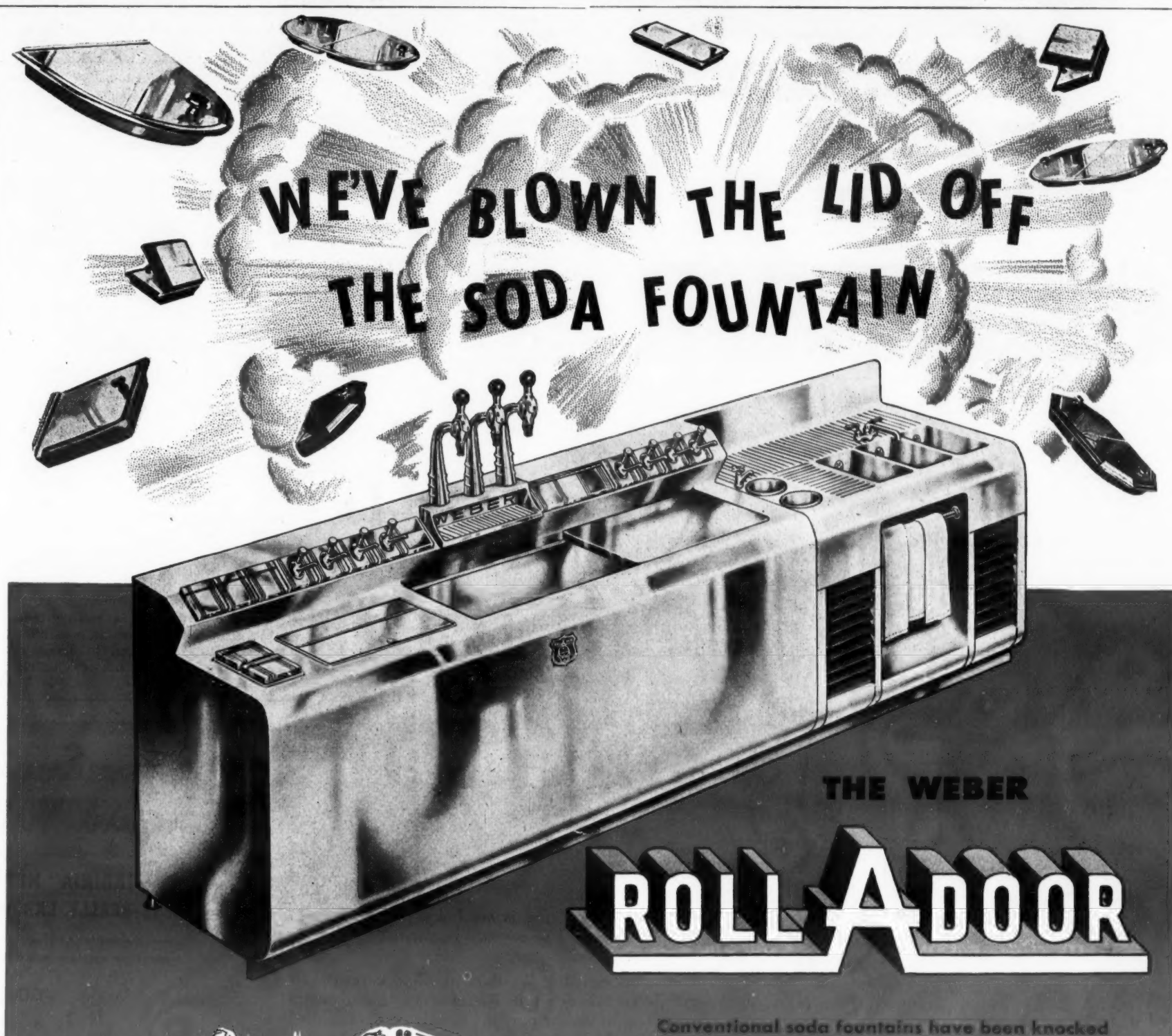
Mr. Rising has been actively associated with the merchandising of major household appliances since shortly after the end of World War I when he opened an appliance store in downtown Los Angeles.

For a short time he was with Philco as San Francisco representative and later became district manager of Pacific Coast operations for the Radio Corp. of America.

Cafeteria Type
WATER COOLERS
For MESS HALLS • HOSPITALS • PLANTS

PACKAGED
Remote and Cabinet Models
Capacity 88 gals. in 2 hour period
For all applications
Quick Shipments
Write for Details
FILTRINE MANUFACTURING CO.
53 Lexington Ave. Brooklyn 5, N. Y.
For Over Filtrine HIGH EFFICIENCY 40 Years

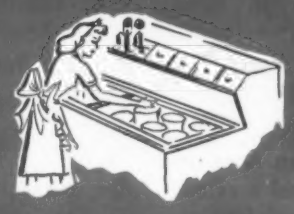
A-S-E FROZ-N-FOOD LOCKERS
INCREASE PROFITS with this LOCKER LINE

For more profits, sell A-S-E Froz-n-Food Lockers.
Note these features:
- Glide - easy drawer action
- Sturdy steel construction
- Rich two-tone finish
- Shipped factory assembled

A-S-E Froz-n-Food Lockers have earned the nation-wide preference of locker users . . . they're the attractive lockers that mean profits for you, satisfaction for your customers.
Write today for additional information.
ALL-STEEL-EQUIP COMPANY, INC.
450 GRIFFITH AVE. AURORA, ILL.



Conventional soda fountains have been knocked into a cocked hat . . . yes, Weber has literally blown the lid off the soda fountain. Not only have we banished the old cumbersome flip-flop or lift-off lids forever, but we have completely revolutionized soda fountain service. The Weber ROLL-A-DOOR has removed the bottleneck in fountain service by providing many revolutionary accomplishments:

GREAT ACCESSIBILITY. Convenient rolling doors give a serviceable work top and greater accessibility to the ice cream.


35% GREATER STORAGE CAPACITY. This additional room in the creamer section means complete fountain service in smaller space.

A PERFECT BALANCE POINT. A much narrower reach combined with a new, more convenient height, provides easier operation and faster service with less effort.

MODERN STREAMLINED STAINLESS STEEL ACCESSORIES. Breakage has been eliminated, syrups cool faster, exact amounts of syrups are dispensed and pumps clean easily.

Weber Showcase & Fixture Co., Inc.
5700 Avalon Boulevard, Dept. "C"
Los Angeles, California
Gentlemen: Kindly send me complete data on the following Weber franchises:
☐ Soda Fountains ☐ Commercial Refrigeration Equipment ☐ Ice Cream Cabinets, Frosted Food Cabinets ☐ Home Cabinets, Farm Cabinets ☐ Walk-in Cooler Low Temperature Equipment.
Name
Company
Address

WEBER MADE FOR WORLDWIDE TRADE
WEBER
SHOWCASE & FIXTURE CO. INC. LOS ANGELES

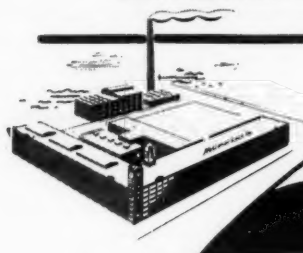
The revolutionary advancement of the ROLL-A-DOOR Soda Fountains is typical of the many sensational sales features of the complete Weber line. Wise dealers everywhere are building their business future around the outstanding advancements of Weber Commercial Refrigeration Equipment, Low Temperature Equipment and Soda Fountains. Mail the above coupon today for full information.

PLAN YOUR FUTURE WITH **WEBER** TIME-PROVEN EQUIPMENT
WEBER SHOWCASE & FIXTURE CO., INC., 5700 AVALON BLVD., LOS ANGELES 54, CALIF.

Headquarters

REFRIGERATOR HARDWARE
for domestic, commercial and low temperature cabinets

Standard and custom built designs. If you are a manufacturer or jobber, write for our new Refrigerator Hardware Catalog No. R-88.



SURFACE TYPE HARDWARE
"THRU THE DOOR" HARDWARE
EDGE MOUNTED HARDWARE
PLASTICS
DIE CASTING

NATIONAL LOCK COMPANY
Refrigerator Hardware Division
ROCKFORD, ILLINOIS

Morton Has New Kitchen Modernizing Plan

CHICAGO—Morton Mfg. Co. has set up a program for kitchen modernization one step at a time, through which all the units going into a new kitchen can be planned for, installed, and paid for individually, according to C. D. Morton, president of the company.

Nash-Kelvinator's distributing organization will carry out the plan, and dealers under it will be able to sell kitchen merchandise unit by unit, instead of having to bid on specifications for complete kitchen contracts at discount figures.

Morton units in the plan will be wall cabinets with fluorescent lighting and sliding glass doors, and floor cabinets with stepped-in bases and kickplates. Sloping fronts and rounded edges will signal modern trends toward safety and efficiency.

The compact units can serve together in work centers, or fit into complete kitchen installations, for the line is completely standardized. The modernization plan is significant because of its greater purchasing facility, meant for those homemakers who want to modernize their kitchens one step at a time and pay as they go.

New Los Angeles Shop

LOS ANGELES—R. T. Caffee Refrigeration Sales & Service Co. is the firm name under which Robert T. Caffee has published a certificate that he is conducting business at 4203 South Vermont Ave., Los Angeles.

New Certificate Offered To Consumers Who Cancel Stove Orders

WASHINGTON, D. C. — Stove dealers, distributors, and manufacturers will give a uniform type of certificate receipt to consumers who cancel their orders for rationed stoves before delivery if the original certificates given with the orders cannot be returned, according to a recent OPA announcement.

A consumer who transfers a new stove to a dealer, distributor, or manufacturer will also be given this uniform type of receipt if the consumer's original certificate is not available.

Explaining use of the new receipt —Form R-911—OPA said that dealers and distributors have been using various forms for this purpose and consumers were finding it difficult to get certificates in exchange for their receipts from local War Price and Rationing Boards. Use of the uniform receipts will simplify the exchange for both the consumer and the local boards, OPA officials declared.

There is a space at the bottom of the receipt for consumer certification. If the local board finds it to be correct, it will issue a certificate to replace the original. The dealer, distributor, or manufacturer must keep a copy of each OPA Form R-911 that he issues.

New Jersey Auto Chain To Handle Appliances

NEWARK, N. J.—R. & S. Auto Stores, operated by Roth-Schlenger, Inc., expects to add a line of major electrical appliances.

This was disclosed in an announcement June 21 in connection with the concern's celebration of its twenty-sixth anniversary. Founded in 1919 with one small Newark store, the firm has expanded into a chain which now includes 22 stores throughout North Jersey.

Henry Schlenger, secretary-treasurer, said that as soon as possible all units will be enlarged to accommodate a full line of major electrical appliances.

Westinghouse Is Using Big Freezer Ad Program

MANSFIELD, Ohio — An all-out promotional campaign announcing its new line of upright home freezers has been launched by the Westinghouse Electric Appliance Division here with advertisements in 15 trade publications, more magazines than ever used before to announce a new product, according to Roger H. Bolin, advertising and sales promotion manager of the division.

Farm and general magazine advertising and commercials on the two Westinghouse radio network programs support the announcement campaign.

The 6-cu. ft. model, smallest of the three upright freezers with front-opening doors and sectional inner doors, are featured in the advertisements.

Home tests of the new Westinghouse freezers indicate that users open their cabinets on the average of only once or twice a day and, therefore, defrosting need be done only once every six to nine months, according to Mr. Bolin. It will not be necessary to remove foods from the storage section when defrosting, he added.

Two home freezing instruction guides, one on the preparation, freezing, and storage of fruits; one on vegetables, have been prepared by Mrs. Julia Kiene, director of the Westinghouse Home Economics Institute. These will be available to retailers, home economists, teachers and extension specialists the latter part of June. Other guides, to be published in late summer, will cover meat, poultry, fish, game, and cooked foods.

Eureka Names New Division Sales Heads

NEW YORK CITY — George H. Wilkens has been appointed sales manager of the Eastern division of the Eureka Vacuum Cleaner Co. here.

Appointment of O. H. Golberg, former director of industrial relations and personnel, as sales manager of the Western division, and George E. Wagner, formerly a member of the executive staff, as sales manager of the central division, were also announced.

You can't pull it out of a hat!

Good air conditioning is *not* hokus-pokus! It can only be the result of *correctly engineered equipment* correctly applied!

From the beginning, Westinghouse has worked singularly on this one principle. For any installation, regardless of size or purpose, is only as *right* as the engineering behind the equipment that performs the magic of *correctly* conditioning the air.

By *correct* air conditioning Westinghouse means the scientific blending of desired temperature, humidity, circulation, ventilation and air cleanliness.

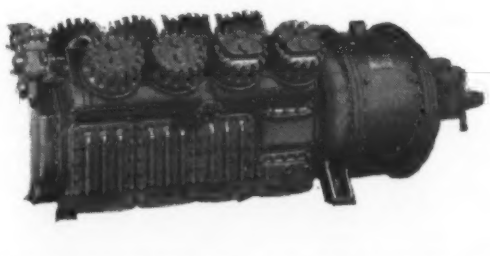
Consider these advantages: First, an air conditioning plant which will provide exactly the conditioned air you want to "live" with. Second, an installation which can be depended upon to give continued trouble-free and economical service. Third, correctly engineered equipment resulting from Westinghouse know-how.

If you're thinking about air conditioning, write for your copy of "How to Plan Correct Air Conditioning." Call your nearest Westinghouse Office, or write Westinghouse Electric Corporation, 150 Pacific Avenue, Jersey City 4, New Jersey.

CURRENT WESTINGHOUSE ADVERTISING IS DESIGNED TO SELL YOUR AIR CONDITIONING KNOW-HOW

The Heart of Correct Air Conditioning

WESTINGHOUSE HERMETICALLY SEALED COMPRESSOR



The entire mechanism of the Westinghouse Hermetically Sealed Compressor—including its motor—is sealed gas-tight. This feature means sealed-in *power and* sealed-out *trouble . . . has been* service-proved *in thousands of Westinghouse installations. Compact and lightweight for easy installation. Low operating costs.*

Westinghouse presents John Charles Thomas — Sunday, 2:30 E.W.T., N.B.C. Tune in Ted Malone, Monday through Friday, 11:45 A.M., E.W.T., Blue Network.

Westinghouse CORRECT Air Conditioning

PLANTS IN 25 CITIES OFFICES EVERYWHERE

Service Engineers Should Know . . .

"VIRGINIA" METHYL CHLORIDE IS REALLY LABORATORY TESTED

— the content of each and every container — large or small — is analyzed 3 separate times.

BOILING POINT TEST

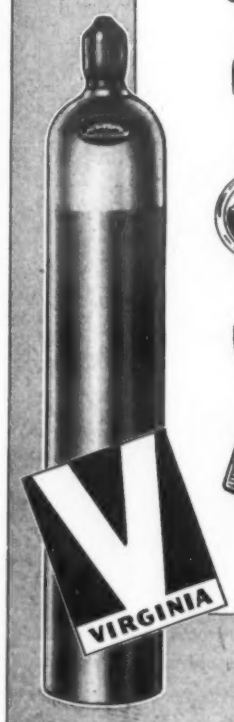
1. A measured sample from each cylinder must be water-white in color and when boiled to dryness must record within 25/100 of 1 degree a constant boiling point of minus 23.8°C. This test detects unwanted hydrocarbons, dirt and oil impurities.

ACIDITY TEST

2. The acid content in a sample of known weight must not exceed 6 parts per million; low acidity prevents copper plating and oil sludging.

MOISTURE TEST

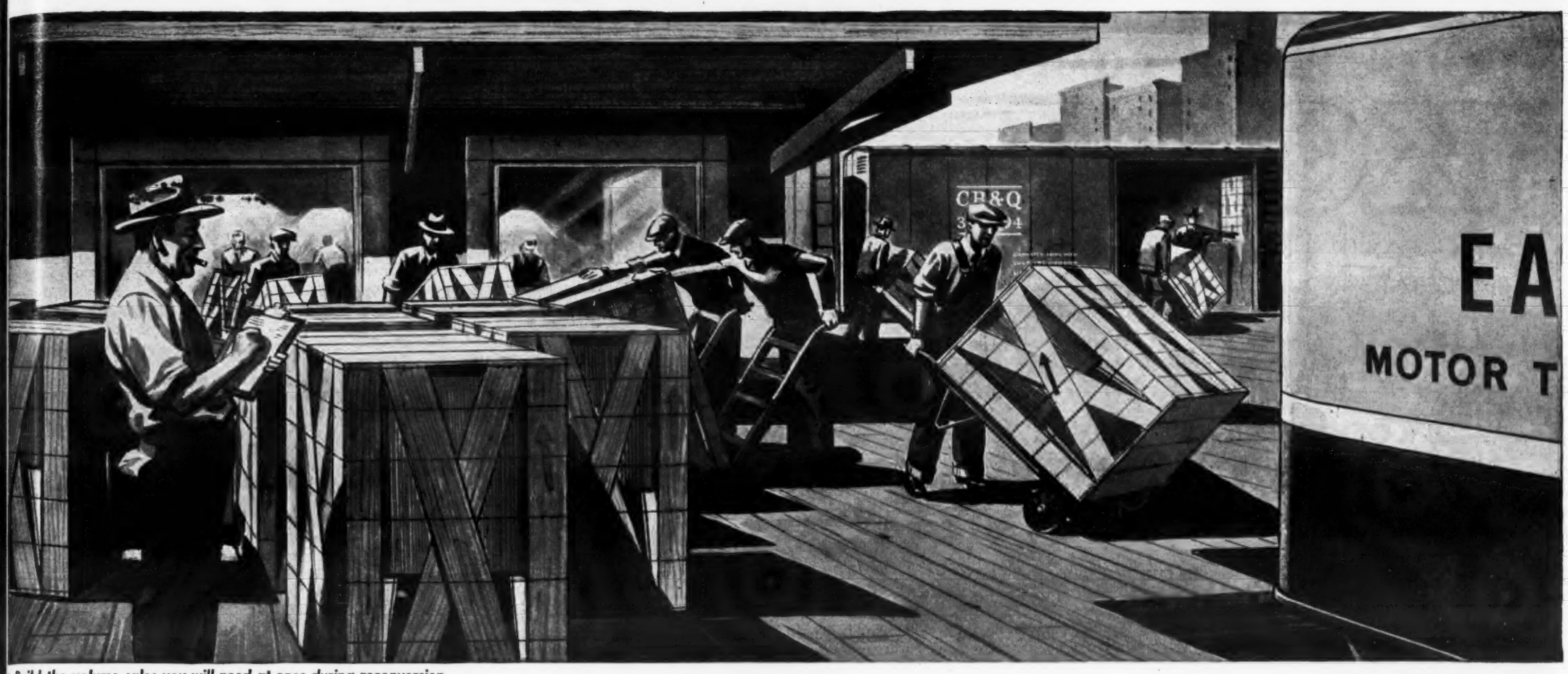
3. The moisture in a sample of known weight must not exceed 80 parts per million; — low moisture prevents freezing at expansion valve and refrigerant break-down.



The name "V-METH-L" on the cylinder is your guarantee of quality. Sold by refrigeration supply jobbers everywhere.

VIRGINIA Smelting Co.
WEST NORFOLK, VA.
76 BEAVER ST., NEW YORK 5 :: 131 STATE ST., BOSTON 4
Agents for Kinetic's "Freon-12" — "Freon-22" — "Freon-11"

Get this DOUBLE RETURN from your first year's selling!



• *Build the volume sales you will need at once during reconversion*

• *Get set solidly with dealers and consumers when competition intensifies*

How you can get going fast with your first year's output...and get set for the days when selling gets tough

You can lay plans now to cash in on the post-war seller's market created by a huge pent-up demand. Simultaneously, you can get ready for the days when competition steps in and selling gets tough.

Surveys in the $4,496,734,000 Chicago market show that sales potentials for autos, refrigerators, washing machines and "big unit" products generally are tremendous . . . enough to absorb the entire production of many a manufacturer. The Chicago market is famous for its big volume buying. It has consistently broken sales records. Favored by high, diversified income from factory, farm and trade . . . backed by huge savings . . . it is strongly reinforced against reconversion and instantly responsive to selling.

Reached through a single medium

Here is an area quickly accessible to salesmen and warehouse shipments. You can take advantage of this quick distribution and volume sales at one low cost through a single powerful advertising medium—the Chicago Tribune.

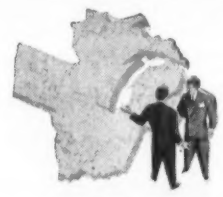
Bought, read and *bought from* as is no other medium in the Chicago market, the Tribune is a powerhouse among dealers and consumers. One out of every three families in 756 cities and towns of 1,000 or more population reads the Tribune daily—on Sundays, almost every other family!

Low milline rate

In addition, the Tribune offers you a choice of monoroto, coloroto, comicolor, newsprint color, or black and white—at one of the lowest milline rates in the country.

Whether your production is large or small, big unit or packaged goods, here is a strategic market far too important to leave wide open to competitors. With the Tribune you can build solidly for long-term, successful business.

For market facts and merchandising ideas, call a Tribune representative.



The Chicago Area: located at the heart of America; famous for its wealth and huge buying activity, big enough to absorb all that many a factory can make.

Available for your study and use is a specific sales program based on the findings of an auto and household appliance investigation among consumers and dealers. To get these pertinent facts, address C. S. Benham, Manager, National Advertising, Chicago Tribune, Tribune Tower, Chicago 11, Illinois.

Chicago Tribune

THE WORLD'S GREATEST NEWSPAPER

May average net paid total circulation: Daily, over 1,000,000; Sunday, over 1,300,000.

WANTED REFRIGERATION-APPLIANCE SERVICEMAN

Household—Commercial—Popular Makes

Must Have Experience

Sales Ability Helpful

EXCEPTIONAL OPPORTUNITY For Man Qualifying

Healthful Climate. Real Living. Established Reliable Firm

MODERN SERVICE COMPANY

10-12 East Colorado Ave. Colorado Springs, Colorado

W. M. C. APPROVED

WHEN PEACE COMES

KOCH

WILL AGAIN PRODUCE COMMERCIAL REFRIGERATOR EQUIPMENT FOR CIVILIAN USE

NOW SOME SELF-CONTAINED REACH-IN REFRIGERATORS ARE AVAILABLE FOR THOSE WHO CAN QUALIFY . . . . . .

Write — Wire — Phone

KOCH REFRIGERATORS

NORTH KANSAS CITY . . . MO.

Inside Dope

By George F. Taubeneck

(Concluded from Page 1, Column 1)

one of my biggest thrills in two years with Montgomery's 'Desert Rats,'" according to Capt. Ray C. Roy, first World War II veteran to return to the sales staff of the Norge division of Borg-Warner Corp.

M. G. O'Harra, vice president and general sales manager of Norge has appointed Ray middlewestern regional sales manager, with headquarters in Detroit. He will cover Illinois, Wisconsin, Indiana, and parts of North and South Dakota and Iowa.

Group air corps supply officer for the United States Ninth Air Force unit assigned to the British Eighth Army, Capt. Roy was with General Montgomery from the dark days when Rommel was threatening Alexandria and the Suez through the entire desert campaign which smashed the Nazis in North Africa. He remained with Montgomery's army in the Sicily and Italian campaigns.

Upon seeing the refrigerator in Tunis, Capt. Roy suffered a disappointment as well as a thrill.

"I wanted my picture taken with it, but didn't have any film for my camera and couldn't find anyone else with a camera," he explained.

The refrigerator, which had been hidden during the German occupation, had just been put on display, and was priced at almost $600. "Its prewar price in the United States was about $175," Capt. Roy said.

A World War I veteran, he maintained a second lieutenant's reserve commission in the interval between the two wars; and in June, 1942, re-entered the air forces with a first lieutenant's commission.

His first association with Norge was in 1935, when he joined the company's sales staff as a washer specialist. He was national representative on all products at the time he rejoined the army.

In the Philippines

A reunion of Philco distributors was held recently in Manila, P. I., when Major N. B. (Chief) Williams, Philco distributor in Peoria, Ill., now a member of the United States Army Air Forces, met Sam Gaches, president and general manager of the H. E. Heacock Co. (which handled Philco in the Phillippine Islands) and his assistant, Donald Gunn.

Major Williams tells of the meeting in a letter to James H. Carmine, vice president in charge of merchandising for Philco:

"I visited the former prison camp at Santo Tomas University where many Americans had been interned during the three years of Jap occupation," Major Williams wrote.

"Inquired for the president of the H. E. Heacock Co., Philco distributors in the Far East—and met Sam Gaches and his assistant, Donald Gunn. Heard the details of the Jap occupation as well as the American invasion from the inside, after having seen it from the air over several places where the fighting was heavy."

Major Williams wrote that he hopes to be in "on the big operation when it comes," and then after V-J day to return to Peoria to resume his activities as a Philco distributor.

Standing of the Clubs

Editors of this "Newspaper of the Industry" spend, on the average, three hours a day answering inquiries from subscribers.

The latter can ask the darnedest questions. Sometimes an individual query will require days and even weeks of research.

We do our best. But some inquiries are unanswerable.

Down through the years we've been working on this job, the one query which pops up most is a query which we can't answer. That one is:

"How many household refrigerators did each manufacturer produce during (a given) year?"

Steadfastly the various manufacturers have guarded this secret. Sometimes we know, but are sworn not to tell.

Well, all you curious folk, a clue to the "standing of the clubs" (a term borrowed from the newspaper sports page) which means, in this case, a clue to relative rank—in the year 1941—has finally appeared.

The War Production Board's authorization of priorities assistance for the purchase of controlled materials by household refrigerator manufacturers is a matter of public record.

It is well known that this conversion program is based upon "historical record" (a percentage of the quantity of units produced by each manufacturer during the year 1941).

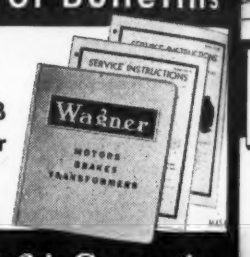
So, after examination of the WPB's assigned quotas for the third quarter of 1945, a careful observer might be led to believe that the leading household refrigerator manufacturers ranked in the following order (in terms of unit sales volume) during 1941:

Frigidaire, General Electric, Kelvinator, Sears-Roebuck, Electrolux, Norge, Westinghouse, Philco, Gibson and Copeland.

There you are, boys. Thank the WPB! But don't blame us!

Send For Bulletins

MU-185, MU-30B, and MU-7B on Wagner ELECTRIC MOTORS

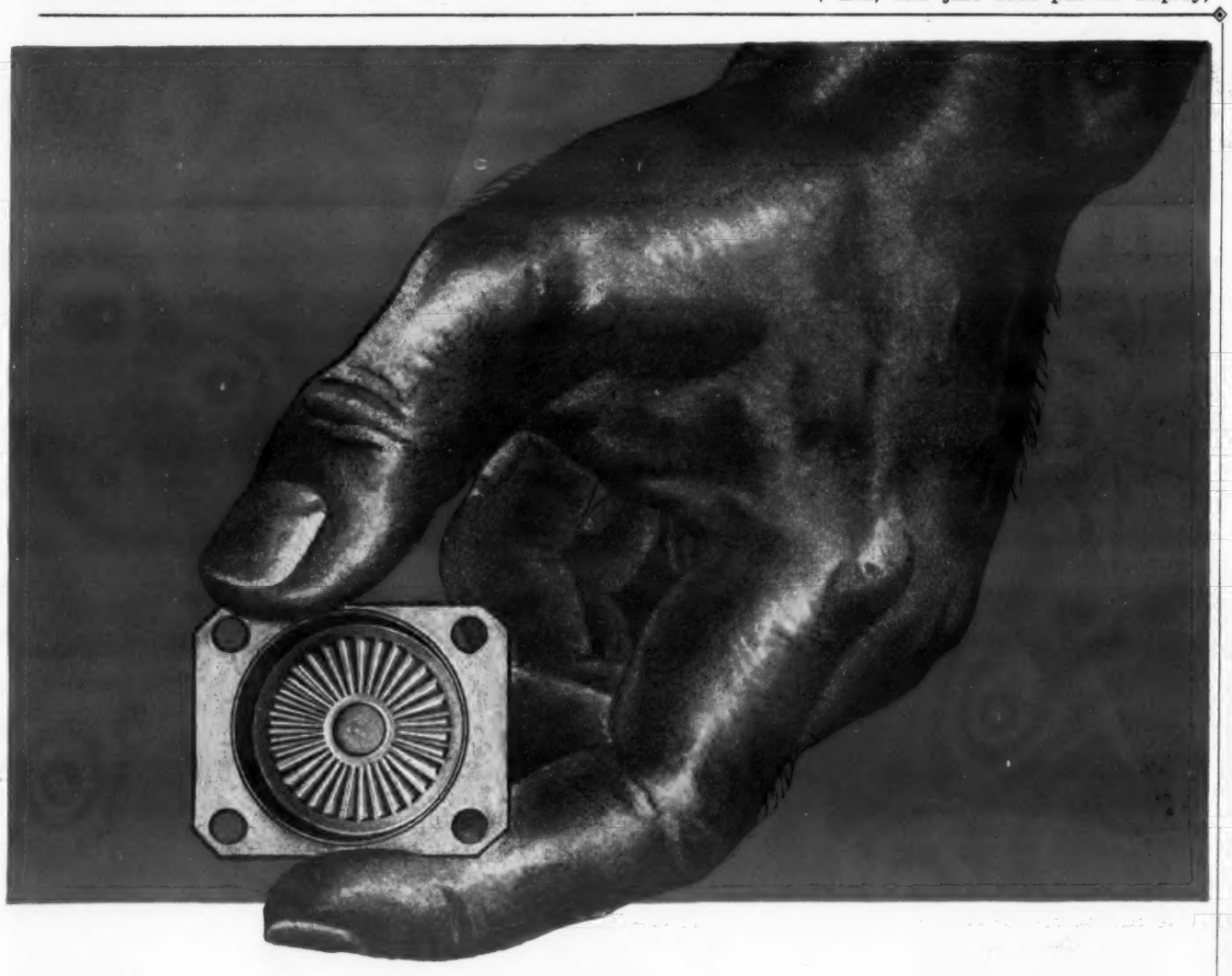


Wagner Electric Corporation

ESTABLISHED 1891

6471 Plymouth Avenue, St. Louis 14, Mo., U. S. A.

ELECTRICAL AND AUTOMOTIVE PRODUCTS



Here is the SECRET of Positive Automatic Temperature Control

WHITE-RODGERS automatic temperature controls operate on the principle of expansion and contraction of a liquid against the diaphragm, with heat and cold. This principle is the *secret* of positive control. The Hydraulic-Action diaphragm is an exclusive feature of White-Rodgers automatic temperature controls. Write today for engineering data for your present or post-war products.

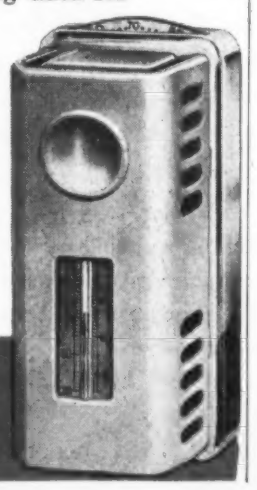
Here's How It Works:

CONTRACTED

At left is a cross-section of the diaphragm and part of the liquid-filled capillary. The liquid has contracted, the diaphragm moving inward, causing the switch to function.

EXPANDED

In view at left, the liquid charge of the capillary has expanded with a rise in temperature. This positive force moves the diaphragm outward and causes the switch to function.



WHITE-RODGERS ELECTRIC CO.

ST. LOUIS 6, MISSOURI

Controls for Refrigeration • Heating • Air Conditioning

That Cold Box You're Planning—

Will it have a handsome modern Dial Thermometer?

● If you are planning refrigeration equipment, particularly the "cold box" type, the Marsh organization is in an excellent position to produce dial thermometers that will grace your equipment—thermometers as accurate as they are attractive. Yet, thanks to modern production methods, we can supply them in quantities at a cost that you can justify in a highly competitive market.

If your present plans do not call for a thermometer, consider this sales building feature in the light of competition that is bound to come. An attractive dial thermometer is the costume jewelry of the refrigerating unit—and proof that the unit is doing its job right.

The thermometer illustrated is the Bi-metallic type, but special types and dials are available in quantity orders. No matter how unusual your design, Marsh engineers are ready to help you incorporate a thermometer that will add another effective talking point to your cold box. Write for further information today.

JAS. P. MARSH CORP., 2067 Southport Ave., Chicago, Illinois

Export Department: 155 East 44th St., New York 17, N. Y.

MARSH *Refrigeration Instruments*

Returned Veteran Gets a Big Response On Shop Re-opening

ELIZABETH, Pa.—Returned veteran Jesse D. Lenhart announced the re-opening of his appliance repair shop by mailing postcards reading, "Just back from serving our country—and ready to serve you again," to 11,000 homes in this vicinity.

Requests for service work on appliances swamped the Lenhart Shop, providing the proprietor and his assistant, Harry Holsopple, with more work than they can handle. Seventy-five per cent of the service requests can be attributed to the postcard mailing, Mr. Lenhart stated.

Discharged from military service March 13, after serving 10 months with the Sea Bees, Mr. Lenhart began preparing his shop for the postwar period. He has enlarged his quarters, is installing more equipment, and has purchased a pick-up truck for delivery service. He is making plans to do merchandising as well as repair work postwar.

Nottage Named ASHVE Research Associate

NEW YORK CITY—Herbert B. Nottage has been appointed research associate on the staff of the research laboratory of the American Society of Heating & Ventilating Engineers at Cleveland.

A graduate of the University of California, Mr. Nottage was instructor in mechanical engineering at the Illinois Institute of Technology, and in August, 1941, he joined the research and development engineering staff of Pratt & Whitney Aircraft, East Hartford, Conn.

Fleetwood Distributing Buys Globe Equipment

NEWARK, N. J.—Fleetwood Distributing Co., commercial refrigeration distributor here, has purchased outright the Globe Store Equipment Co., 458-462 Broad St., Newark.

Purchase of the Globe interests will round out the Fleetwood Co.'s line of equipment, according to Wallace W. Lowensten, head of the company.

The sales staff and operating personnel of the Globe Co. will be retained. Fleetwood will move its display and office equipment to the Globe showroom.

Marine Refrigeration Co. Formed In Oakland

OAKLAND, Calif.—Fred W. Cook and Alex Johnston, co-partners in the Pacific Marine Refrigeration Co., recently announced the opening of offices at the Latham Square Building, Room 401, Oakland 12.

Medical Authority Cites Food Poisoning Danger As War Continues

SAN FRANCISCO—The margin of safety against food poisoning at present is strained to the danger point, and as wartime conditions progress, the problem of food poisoning is likely to assume greater importance.

So says Dr. Karl F. Meyer, director of Hooper Foundation for Medical Research on the San Francisco campus of the University of California.

Refrigeration of all foods subject to the commonest form of food poisoning, staphylocci, should be insisted on by health departments, according to Dr. Meyer. Staphylocci which produce enterotoxin, a toxin which causes severe intestinal disturbances, are usually present, but multiply rapidly when not kept under refrigeration.

Max Schinke To Head All Admiral Service

CHICAGO — Max J. Schinke has been named manager for all Admiral Corp. products.

Mr. Schinke formerly held this position with Stewart-Warner Corp. Admiral acquired the appliance division of the Stewart-Warner Corp. in February, 1944.

Mr. Schinke is chairman of the Service Committee of the Radio Manufacturers Association.

Dr. Pennington To Maxson

NEW YORK CITY—The Maxson Food Systems, a division of the W. L. Maxson Corp. here, has announced the appointment of Dr. M. E. Pennington as consultant on the preservation of perishable foods.

Dr. Pennington is a well-known authority in the field of perishable foods and has received several honors in recognition of her work.

Instrument Testing Is Perfected by Air Control

MOUNT VERNON, N. Y.—Sensitive Research Instrument Co. has installed a Carrier self-contained air conditioning unit in its instrument testing laboratory here, reports V. P. Cronin, chief engineer.

By means of the Carrier equipment, a temperature of 70° F. and a relative humidity of 45% is maintained in the laboratory where instrument testing is done.

"This temperature is most important because when we ship electrical measuring instruments, we do not know where they are to be used.

"It is imperative that the user know the temperature at which the instrument was standardized, since the essence of instrument measuring practice is the ability to come back to a known standard."

This may be accomplished in any climate by applying certain temperature correction formulae, when the standardizing temperature is known.

PURO ELECTRIC WATER COOLERS

BRANCHES IN PRINCIPAL CITIES
MAIN OFFICE
440 LAFAYETTE ST.
New York 3, N. Y.
PURO FILTER CORP. OF AMERICA
DRINKING WATER SPECIALISTS FOR 40 YEARS.

FOOD MUST BE CONSERVED

Refrigeration today is performing a vital service by guarding and preserving for future use, priceless food which might otherwise be wasted. Write for literature.

GENERAL REFRIGERATION DIVISION
Yates-American Machine Co.
Beloit, Wis.

Kipman
AUTOMATIC REFRIGERATION

EASY TO USE!

Another reason why so many servicemen all over the country do their buying through the

NEW 1945 AIRO Wholesale CATALOG of Refrigeration and Air Conditioning PARTS - TOOLS - SUPPLIES

Send for your copy TODAY

AIRO SUPPLY CO. (NOT INC.)
WHOLESALE ONLY
2732 N. Ashland Ave., Dept. B
Chicago 14, Illinois

Another boost for air conditioning

...the "FREON" Campaign in TIME

...and bake until well done-in
"Like working in an oven" is the way they usually say it after a dragging hot-weather workday. And it's pretty nearly true about many offices. No wonder efficiency and morale go into a nose-dive during the summer months.
There's a different spirit and better work when employees know the hot weather will stay outside the office... when conditioned air keeps temperatures cool and tempers serene. Some offices report that air conditioning ups efficiency as much as 50%. Even the most conservative figures say 20% to 30%... enough to make the installation pay for itself in a very short time.
Business men appreciate the advantages of "Freon" refrigerants in air conditioning systems. "Freon" is safe, non-toxic, non-flammable, non-explosive. Of course, today war demands are taking a lion's share of this safe refrigerant. But because of expanded capacity, "Freon" is again available for comfort air conditioning. Kinetic Chemicals, Inc., Tenth and Market Streets, Wilmington 98, Delaware.
FREON safe refrigerants
REG. U. S. PAT. OFF.
"Freon" is Kinetic's registered trade mark for its fluorine refrigerants

Got the hot weather horrors?
1. Does torrid summer wear you down? Dread those tiring trips to town?
100% AIR CONDITIONED
2. Hate to shop in stuffy places? Tired of seeing sweaty faces?
3. Find the stores that boast this pleasure: "Conditioned air" in ample measure.
4. Treat yourself... enjoy your shopping. Feel refreshed... forget brow-mopping.
BUY BONDS HERE
5. Air conditioning, smart merchants say. Brings in crowds throughout the day.
6. But hot or comfortable... don't forget War Bonds are today's best bet!
"FREON" refrigerants are widely used in store and office air conditioning systems. They're safe, non-toxic, non-flammable, non-explosive and provide efficient refrigeration at low cost. War requirements are still taking large quantities of "Freon." But recently enlarged facilities have made "Freon" again available for comfort air conditioning. Kinetic Chemicals, Inc., Tenth and Market Sts., Wilmington, Del.
FREON
REG. U. S. PAT. OFF.
safe refrigerants
"Freon" is Kinetic's registered trade mark for its fluorine refrigerants

Two typical ads from the "Freon" series in TIME.

Again, "Freon" is taking TIME to sell air conditioning to the more than 2,200,000 readers of this popular magazine. These people are being reminded again and again of the advantages and benefits of air conditioning. And they are being informed that "Freon" is now available for civilian use.

The campaign is another boost for air conditioning. It ties in with the current advertising conducted by equipment manufacturers and is helping to round out the publicity given this modern necessity. It is also helping to create a desire for air conditioning among those who are in a position to buy or specify it. Kinetic Chemicals, Inc., Tenth and Market Streets, Wilmington, Delaware.

FREON AVAILABLE

"Freon" safe refrigerants are again available for civilian use. Increased manufacturing facilities have made this possible. Systems that are using substitute refrigerants can be reconverted to "Freon" at once.

KINETIC
FREON safe refrigerants
REG. U. S. PAT. OFF.
"Freon" is Kinetic's registered trade mark for its fluorine refrigerants.

Buffalo Dealer Explains His Viewpoint On Furniture vs. Appliances Problem

BUFFALO—Schwegler Bros., one of the larger appliance dealerships here, turned to furniture when appliances went off the market early in the war, and has found it so profitable that the firm plans to stay in the furniture field postwar, handling appliances as more or less of a sideline, reveals Albert Schwegler, head of the company.

"Selling furniture has been very profitable," says Mr. Schwegler. "For one thing, there's no service problem. I don't know why it is, but when customers buy appliances they become much more sensitive to the slightest fault. When I used to make an appliance sale I always wondered whether that buyer would become a friend, or would merely be the cause of trouble," he declared.

"With furniture sales customers don't seem to react that way, and, another thing, there is no trade-in problem with furniture.

"One of the chief reasons why I prefer furniture to appliances," continued Mr. Schwegler, "is that we don't have to worry about cut-throat competition.

NO '20% OFF'

"Because the furniture retailer is not selling a 'national brand' of furniture, he doesn't have to worry about a competitor offering 20% off on the same make of, say, a davenport. We used to have a lot of that trouble in selling refrigerators," complained Mr. Schwegler. "A prospect would come in and tell us: 'why, I can get the same model refrigerator down the street for $30 less than you want.'

"But that sort of thing doesn't occur in furniture," he added. "We may have the only table or davenport of a certain type in the city of Buffalo, and so we don't have to worry about customers' telling us they can get the very same thing cheaper at some other store.

"For some reason," he continued, "the refrigeration field, from the manufacturers on down the line, has always been made up of high pressure operators. If you aren't meeting your quota, the distributor hurries over and suggests you hold a meeting to pep up your salesmen, and so you hold the meeting and excitedly urge the men to get out and make their sales.

DEALER ASSOCIATION MISSING

"Not so in the furniture field. Further, I think that national furniture associations have done much to help the furniture retailer, but the refrigeration industry lacks such organizations, and really seems to lack that sort of spirit," contends Mr. Schwegler.

"Naturally we're going to handle appliances as soon as they are available, and we expect to find them profitable, especially since we'll be depending upon furniture, not appliances, to meet overhead," he said.

"Having both appliances and furniture on sale should likewise result in some pretty good sales to w veterans," pointed out Mr. Schwegl

"When the veterans and the wives start establishing their ow homes after the war, they'll probab come in to buy all the appliances a furniture they need, or can affor at one time, which should mea several single sales up in the $1,0 to $1,500 bracket," he explained.

Schwegler Bros. has been in th appliance business for years, but i history goes "way" back. The fir originally was a music house sellin pianos, music, etc. As radios ca into the picture in the early 1920 the company took on radios, a soon was doing a million-dollar bus ness yearly in the line, according Mr. Schwegler.

Gradually the firm added washer then refrigerators, and finally oth appliances as the radio business f off with the advent of much cheap radio sets than were originally the market.

Up until the war, Schwegler Bro had operated four branch stores, i cluding one in Niagara Falls, N. Y

"These were darned expensive operate, what with having a ma ager in each store, clerks, and, the Niagara Falls branch, an i dependent appliance repair setup said Mr. Schwegler. "For examp we used to have a direct telepho line to the Niagara Falls branch, a between this, and calls to our oth three branches, our telephone b amounted to $300 a month. No, don't plan to re-open any branch after the war."

Editor's Note: It's not news that the conventional operations of the average appliance dealer were thoroughly jolted when appliances disappeared from the market early in the war.

But it is important to observe that the patterns of dealer thinking developed by these exigencies may be carried into the postwar period, as was indicated in talks with two well known Buffalo dealers, Schwegler Bros. and Wangler Bros. Both plan to push appliances as soon as they're available, but the experiences of the past three years will certainly influence their postwar activities. See pages 14 and 15.

Oasis Electric Water Coolers are always "out in front" when it comes to *low-cost delivery of cool,* refreshing water. Their trim, *rugged,* compact design . . . pleasantly *splash-free* bubbler action . . . carefree, quiet-running performance — all are the result of EBCO's 20 years of progressive leadership in the electric water cooler field. Wherever *thirst* is a problem, OASIS is the answer!

The EBCO Manufacturing Co.
401 W. Town St., Columbus 8, O.

	CHECK these EXTRA VALUES	EMERSON-ELECTRIC MOTORS	OK
1	RELIABILITY... Time-tested	54 Years	✓
2	COMPLETE LINE... Sizes 1/200th to 5 H.P.	For All Appliances	✓
3	ENGINEERING SERVICE... Design—Development	Complete Cooperation with Manufacturer	✓
4	TRADE ACCEPTANCE... Sales value in name	Long Established	✓
5	NATIONAL ADVERTISING... Consumer Acceptance	Extensive	✓

These are values you can't SEE in ELECTRIC MOTORS

A motor has two jobs—it must power your product and protect your future market. That's why it pays to look *back* of the motor for the extra values that go beyond the physical appearance.... Five hidden values back of Emerson-Electric Motors are tabulated above. Check them carefully—because no matter how good your product may be, it is finally no better than the motor that drives it.

COMPLETE LINE—Sizes 1/200 to 5 H. P.... Particularly valuable to manufacturers producing motor-driven equipment of varying types, sizes and capacities is the wide choice of motors offered by Emerson-Electric, for practically all classes of domestic and commercial appliance drives.

INVESTIGATE *the extra values* back of Emerson-Electric Motors. Give your products this *extra sales value.*

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Branches: New York • Chicago • Detroit • Los Angeles • Davenport

Emerson-Electric split-phase motors are built in sizes from 1/20 H. P. to 1/4 H. P., for operating conditions requiring low-starting-current characteristics.

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Emerson-Electric manufactures a complete line of motors in single-phase, polyphase and direct-current types, in sizes up to 5 H. P.

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MOTORS · FANS — APPLIANCES

"The Plant that Service Built"

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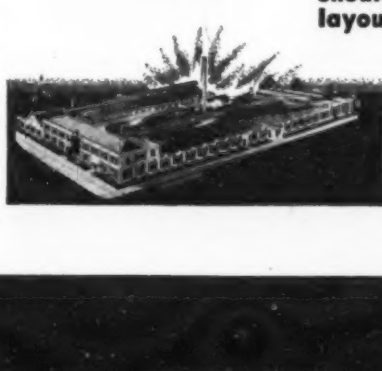

NORTHERN INDIANA BRASS CO
ELKHART, INDIANA
VALVES AND FITTINGS SINCE 1904

Dealer to Keep Wartime Substitute Line of Hardware & Promote Appliances, Too

BUFFALO — Despite having no appliances to sell during the war years, Wangler Bros., veteran appliance dealership here, has made more money than in the prewar years, but only after much more work, declares Richard Wangler, one of the two brother-partners operating the store.

Between servicing small electrical appliances and selling hardware the firm has not had to worry at all about the sheriff, and while Richard Wangler and his brother Otto E. (who handles the firm's electrical contracting business) are anxious for the return of appliances, they don't intend to abandon the thriving hardware trade they established in the past three years.

Formerly a General Electric dealership, the firm is not certain what lines it will take on when appliances become available. Definite plans for promoting some line of home freezers are being made, however.

MORE GOODS, MORE ROOM

"After the war we plan to increase our floor space and to remodel extensively," said Dick Wangler. "As anyone can see, we are extremely short of room now."

And they really are. The rather small store is jam-packed with all types of "hardware" ranging from ironing boards to paint, scrub brushes to furniture polish, and piled up to the ceiling are small appliances awaiting repairs or already fixed up for the owner. It seems even more crowded in the back room where repair parts are stored and where repair operations are conducted.

"We have plenty of space for building expansion, since our lot extends 156 ft. beyond the back of our store," explains Dick Wangler. "Three times we have applied for a building permit and been turned down, but as the materials situation eases up, I'm certain we'll get approval the next time.

"When we remodel, we'll probably extend the building all the way back to the lot line, and then we can put in the kind of displays we really need," he added. "Our plans call for a 100-ft. display of appliances along one wall *and a 100-ft. display of hardware along the other.*"

"Yes, the hardware business and our service operation have been lifesavers for us, and we intend to keep both these departments running."

A big factor in the firm's success with hardware has been the third Wangler brother, Charles. A veteran hardware man, Charles Wangler came into the firm shortly after the war began, Dick said.

Servicing small appliances (the company gave up refrigerator servicing some years ago because, for one thing, they didn't have the space to handle it properly) has also been very important in keeping the firm going, according to Dick Wangler.

"Servicing these small appliances is pretty difficult nowadays," Dick said, "because many appliances aren't really worth repairing. However, we realize that if we don't repair them our customers and future prospects for appliances won't be able to buy new ones, so we do the best we can, even though we know the appliances probably won't operate very long."

Besides doing a careful repair job, Wangler Bros. tries to give quick service, even in these times. While Dick Wangler was outlining his wartime experiences and future plans a man walked in with a set of electric hedge trimmers.

"The wire keeps pulling out of the switch, Dick," he said. "Could you fix it up in a couple of minutes?"

"We'll see," and Dick took it back to the repairman.

Ten minutes later the job was done, and another customer satisfied.

"We'd rather not give that sort of quick service too often, since it interferes with our regular repair schedule and delays the jobs that are already in the shop," Dick explained.

"But," he admitted, "it certainly does build up and maintain customer goodwill."

(Incidentally, the customer left a cigar for the repairman.)

It's this sort of thing that keeps customers satisfied and also results in good floor traffic, which can always be counted on in normal times for sales of appliances, according to Dick.

Another source of appliance sales in normal times, and a factor in keeping people interested in the Wangler store during the war, is the fact that the firm accepts payment on gas, electric, and telephone bills, and is the only place in a rather large area offering such service, according to Dick. Additonal leads on appliance sales come from brother Otto, who has always handled house wiring and other electrical contracting.

Because of the floor traffic resulting from servicing and people coming in to pay utility bills, and the leads developed through the contracting work, the firm doesn't have to concern itself too much with sales promotion, especially since it has been in business so long in the same locality, explains Dick.

For the same reasons Wangler Bros. is not very interested in employing outside salesmen.

"Just now our plans for having an outside appliance salesman are not definite," said Dick. "In fact, our experience with outside salesmen in the past hasn't been very satisfactory. A poor salesman can do us more harm in a week than we can overcome in two years," he contends.

"Of course, if we can line up a top-grade salesman with a proven record whom we can depend upon not to tell prospects things that aren't true, we may consider taking him on. Otherwise not."

Sampson Electric Co. Is Now 'The Sampson Co.'

CHICAGO—Sampson Electric Co., a 25-year old distributorship here, will hereafter do business under the name of The Sampson Co., announces Peter Sampson, president.

Other than this change in name, there will be no change in structure of the company, concluded Mr. Sampson.

--WANTED--

By a New England manufacturer in the MAJOR HOUSEHOLD ELECTRIC APPLIANCE FIELD the following qualified personnel:

ADVERTISING & SALES PROMOTION MAN.

ASSISTANT SALES MANAGER.

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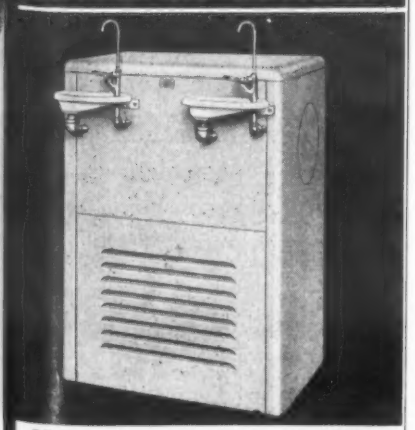
PROMOTION SALESMEN for field work with Distributors and Dealers.

Opportunities for key positions to aggressive men in organizing and operating a national distribution and merchandising campaign. Write full particulars. All replies confidential. Box No. 1751, Air Conditioning & Refrigeration News.

NOW! COOLERS FOR WAR PLANTS



Now they can be sold! Day and Night glass filler coolers for industrial cafeterias; bubbler coolers for war plants.

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DAY & NIGHT MFG. CO.

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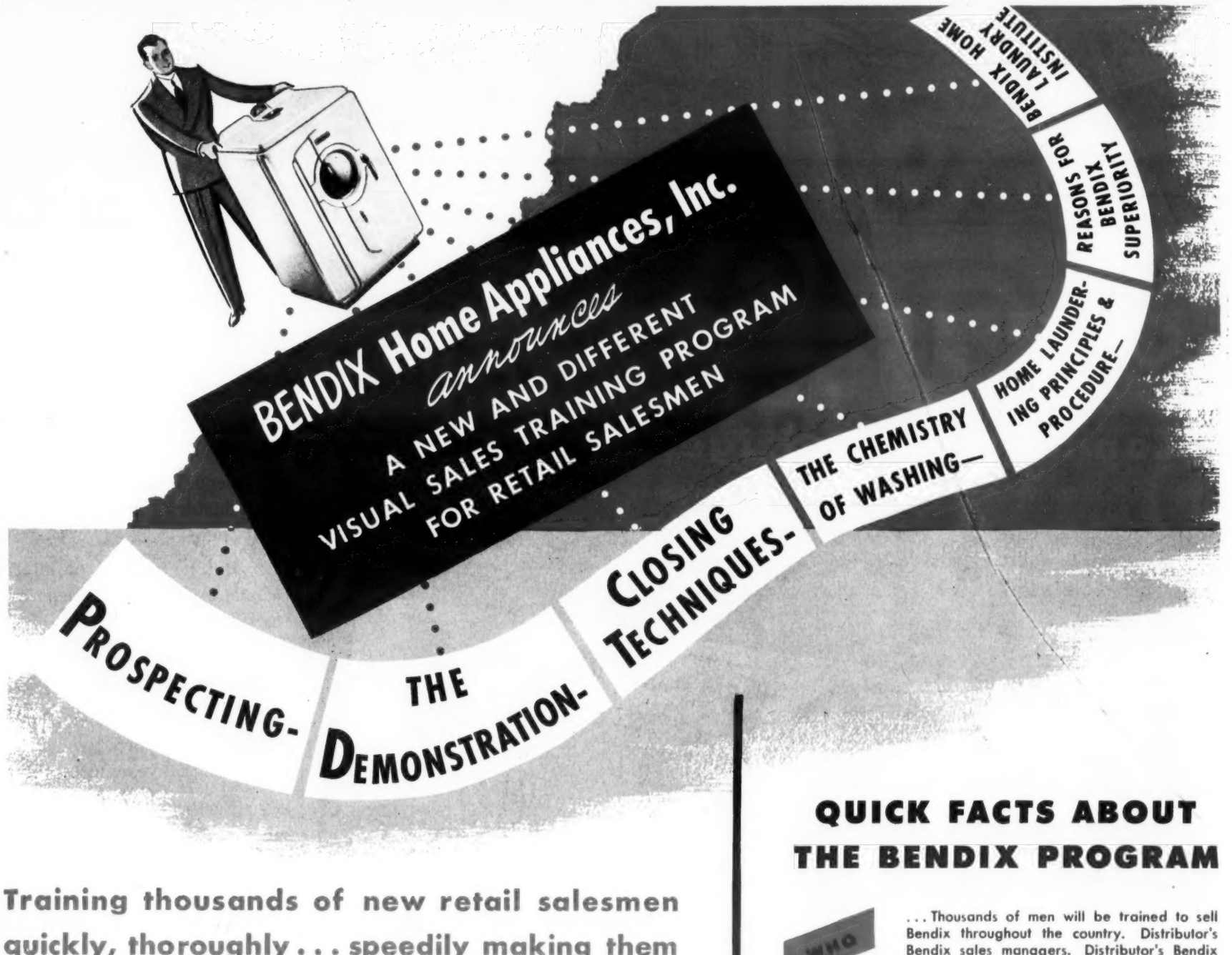

Training thousands of new retail salesmen quickly, thoroughly . . . speedily making them capable salesmen for BENDIX dealers . . .

Looking into the postwar future, Bendix announces one of the most thorough and modern training programs in the industry!

A COMPLETE COURSE in Bendix Automatic Home Laundry selling to enable key retail salesmen to be trained quickly by visual methods—so that they may return to their distributor and dealer territories, and train others by the same tested methods.

EVERY PHASE of Bendix selling will be covered by the latest methods, developed and proved by the Army, in its mass training programs: through demonstration, illustrated chart presentations, dramatized sales skits, sound slide films, chalk talks and actual student practice.

YOU PROFIT through the acquisition of new, yet thoroughly trained sales personnel. Men who have had little or no sales experience can readily sell the famous Bendix Automatic Home Laundry after passing this complete training course.

NOT ONLY SALES TECHNIQUE, but the story behind Bendix, the market for "washers," the chemistry of washing, manufacture, home service, advertising and merchandising, are covered in the Bendix sales program. It is complete in every respect—tested, streamlined, *PERFECTED TO TRAIN A MAXIMUM OF PEOPLE IN A MINIMUM OF TIME* —with complete Army principles and thoroughness.

Full details will be available soon . . . through your distributor.

QUICK FACTS ABOUT THE BENDIX PROGRAM

WHO . . . Thousands of men will be trained to sell Bendix throughout the country. Distributor's Bendix sales managers. Distributor's Bendix wholesale men. Dealers. Dealer's Salesmen. Utility Salespeople. Department store sales people.

WHAT . . . The Bendix Sales Program will provide every proved selling device: Visual training charts. Slide films. Training booklets. Demonstration charts. Presentation books. Regular bulletin service.

WHERE . . . Training Distributor's exclusive Bendix specialists at the factory. Dealers, utility and department store personnel in the field. Continuous "refresher" courses, in the field.

WHEN . . . The Bendix Sales Training Program will start soon, (Distributors will notify you).

WHY . . . To make the people who sell the Bendix Automatic Home Laundry the best equipped and hardest selling army of salesmen, in the entire home appliance field.

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PENCILS? SURE, BABY... ANYTHING FOR YOU. ON THE SECOND SHELF. HELP YOURSELF. THAT'S O.K., YOU CAN GIVE A REQUISITION TOMORROW.
OFFICE MANAGER
JIMMY HATLO
BUT NOW ARSON IS IN BUSINESS FOR HIMSELF - AND ... WELL... JUST ASK HIS STOOGE ABOUT IT ...
ANOTHER PENCIL? I GAVE YOU ONE ONLY LAST WEEK. TURN IN THE STUMP BEFORE YOU GET A NEW ONE! WHAT D'YA THINK THIS IS-LEND LEASE?
NOTICE ALL PERSONAL CALLS MUST BE MADE FROM PAY 'PHONE IN LOBBY
12-27
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Thanx TO C.C. BECK, NEW YORK, N.Y.

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Commercial Refrigeration Units

. . . are universally known for their dependability and freedom from maintenance expense. Your installation will give just as satisfactory, trouble-free service as the thousands now in use throughout the world. Read what one user says about his Curtis Model 50-R Unit.

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May 9, 1945

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Curtis Refrigerating Mach. Div.

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Kindly send me your bulletins C-50B, C-58 and C-68C. I have a Curtis air-cooled unit operating two cases in my store since 1937 and had excellent service from this machine. It's the only unit we've had that gave us so little trouble for the length of time we've had it. We bought one belt and one dehydrator since we had it. When we plan to buy new equipment, you can be sure it'll be Curtis Thank

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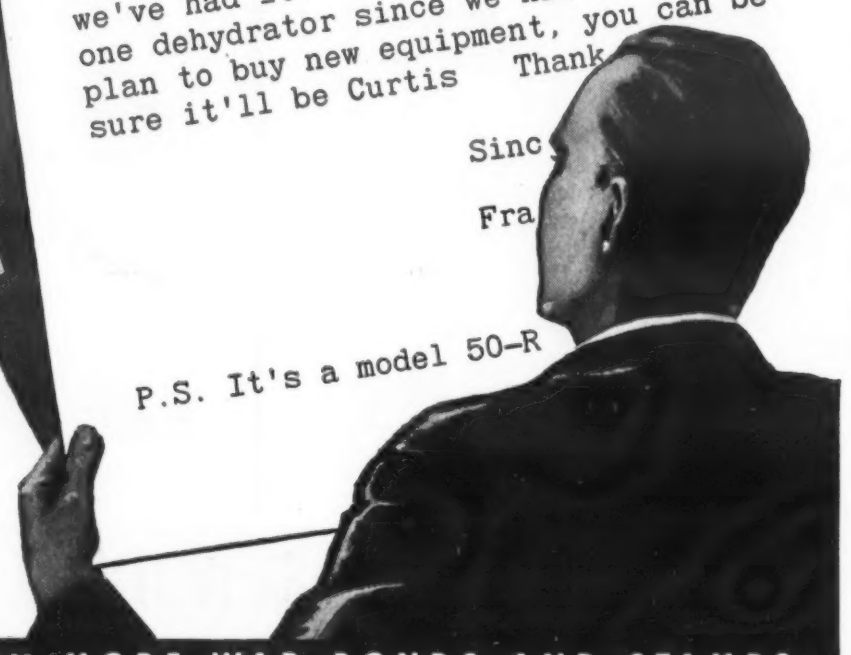
P.S. It's a model 50-R



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of Curtis Manufacturing Co.
1912 Kienlen Avenue
St. Louis 20, Missouri

B-455

FOR VICTORY BUY MORE WAR BONDS AND STAMPS

Trade Mark registered U. S. Patent Office; Est. 1926

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AIR CONDITIONING AND REFRIGERATION News

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VOLUME 45, No. 11, SERIAL No. 852, JULY 16, 1945

What Are Our Chances In the Export Business Of Tomorrow?

AMERICA has become the most amazing exporting nation the world has ever seen—because of the Lend-Lease arrangements.

Other nations haven't had to pay for goods we've shipped them during the course of World War II, so they've taken the output of our mines, our farms, our factories, and our labor without stint and with avidity.

Lend-Lease has been the most terrific give-away proposition in all history. Perhaps it was justified. We shan't argue that point here.

But no student of international finance will deny that all recipients of Lend-Lease *largesse* were mighty happy about the whole thing.

Uncle Samuel has been throwing thousand-dollar bills out of the window to all comers—almost!

Even beyond Lend-Lease "export" figures, however, this nation has exported more than three billion dollars worth of goods in the year just past. This was an all-time record.

Furthermore, this non-Lend-Lease export total amounts to more than *triple* Great Britain's exports during a comparable period.

We must have something.

At least, you can be sure that we have *specialty products* which all the world wants and needs, and which no other nation in the world can provide at "decent" prices.

America is a nation which for many decades has suffered an unwieldy excess of exports over imports throughout the world.

Yet some Congressmen would try to subsidize those products of which we normally produce a surplus—but which, by virtue of our highest labor-wage standards, have priced themselves out of competition with other producers of raw materials in this world.

Examples: cotton, wool, wheat, whisky, beef, pork, and other staples.

Every pound of cotton and every bushel of wheat—which has to be subsidized for export—is using up precious, artificial dollar exchange which should rightfully be employed to buy those specialty products which this nation can always export without recourse to subsidies.

To thrive in the export field, and still maintain and preserve our high standards of living for "the masses," this high-labor-cost nation will have to *concentrate* on the production-for-export of those specialty products which we can make, design, and sell cheaper and better than can any other nation in the world.

When will we get smart?

"10 TO 20 DEGREES LOWER REFRIGERATING TEMPERATURE FOR WALK-IN BOXES . . . NO FROSTING OF COILS — WITH AN "A-P" THERMOSTATIC EXPANSION VALVE ON OUR SYSTEM". . . .

WALK-IN BOX TEMPERATURE REDUCED

No More Coil Frosting

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FOR THE FIRST YEAR following installation of new refrigeration equipment, defrosting all the blower coils in the walk-in box was a daily job for the engineering staff of a large Ohio hotel. And the temperature in the butchers' box could not be reduced to below 50 or 60 degrees. After installing an "A-P" Thermostatic Expansion Valve for Freon, the thermostat was set for 40° and HELD THERE. Besides this, the coil remained free of frost — saving need for daily defrosting.

RESULTS LIKE THIS never surprise Refrigeration Engineers who know from experience what "A-P" Valves can do. It is always safe to rely on "A-P" to solve any refrigeration problem you encounter. Refer them to us—any time.

Ask for illustrated bulletins covering "A-P" Dependable Valves.

A-P Model 215 Thermostatic Expansion Valve. Capacity, up to 6 tons Freon.

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TYLER REFRIGERATORS

Greatest Postwar Gain In Frozen Foods Will Be In Retail Stores

NEW YORK CITY — "There is every reason to expect a 300% to 400% increase in production of frozen foods in the next five years," declared George W. Meek, president of Frozen Food Products, Inc., in a talk before the council of the American Institute of Consulting Engineers here recently.

Pointing out the advantages of frozen foods, such as improved taste, ease of preparation, economy, and out-of-season convenience, Mr. Meek described at some length the basic methods of distributing frozen foods, shown on the accompanying chart.

"The channel shown in Chart A is the most direct method by which frozen foods reach the table," said Mr. Meek. "A home gardener or farmer buys a cabinet which will freeze and store food. He prepares the food for freezing and stores it until ready for fabrication into a meal. Present estimates indicate that there are not more than about 50,000 home and farm freezers and converted ice cream cabinets in use at this time.

"About a year and a half ago a tabulation was made to show that over 300 firms were talking about going into the business of making home and farm freezers and estimates as to the postwar sales ran from a cautious guess of 50,000 units per year to an optimistic estimate of 2,000,000 per year.

"As we draw near to the starting line and as it comes time for these firms to lay down the cash for tools, dies, and machinery, indications are that the list has already shrunk to less than a 100 possible manufacturers and we can be sure that by the end of the first postwar year the list will probably be considerably less than 50.

GUESS ON HOME FREEZER SALES

"It is my guess that there will be possibly a *maximum* of 125,000 to 175,000 home and farm freezers and storage cabinets sold during the first year after the war," opined Mr. Meek.

The small storage cabinets of 3 and 4 cu. ft. will probably sell for around $150 and the 25 or 30-cu. ft. boxes, which are the practical minimum for the farm families, run at $400 to $500, said Mr. Meek. It is obvious that this poses a very definite problem of economics. A housewife may "can" her food at a very low capital expense for glass jars and pressure cooker, but a very sizeable capital investment is required if anyone wishes to "freeze" their food at home.

"The black market situation in meat has served to greatly popularize the frozen food locker plant during the last two years and here again we hear some fallacious reasoning with respect to postwar sales," he continued.

PLACE OF LOCKER PLANTS

"There are approximately 5,000 locker plants in the country at the present time which serve to bring food to the table through the channel shown in Chart B.

"Estimates as to the number of these plants to be built in the first postwar year run all the way from 3,000 to 10,000 complete plants. Most realistic studies on the subject indicate that these plants will be confined largely to rural areas where an economical service can be rendered to the farm families.

"When there is no incentive of being able to get a little black market meat out of the locker, there will be little reason for the city-dweller to undergo the inconvenience of traveling a couple of miles to a frozen food locker plant," he declared.

"Even with a more generous sprinkling of urban locker plants, my guess is still that the majority of families that can afford to rent a locker will prefer to have frozen food storage in their own home—even if only an enlarged low-temperature space in their household refrigerator."

By all odds it would seem as though the greatest poundage of frozen food would reach the postwar table via the commercial distribution channel, said Mr. Meek. Such has been the history of practically all other food products and while there will undoubtedly be many users of home and farm freezers, commercial food processors will supply the bulk of the frozen food production. The products of the present 400 odd packers in general ultimately reach the table via the labyrinth shown in Chart C.

SEES PRODUCTION DOUBLED

"It is entirely possible that within the next three to five years the number of quick freezing plants will double the figure of 400 mentioned above, with many of the new plants freezing *cooked* foods," Mr. Meek stated.

"The transportation link in Chart C is important because the high production on the west coast must be channeled across the country to the centers of high population in the east.

"Refrigeration facilities for long-haul currently consists mainly of salt-iced refrigerator cars and a much smaller proportion of insulated truck trailers which, if they use any refrigeration at all, use it mainly in the form of an occasional charge of dry ice.

"It is not contemplated that over the next few years there will be any large scale installations of mechanical refrigeration equipment on railway cars, but it is contemplated that the portion of the frozen food handled by long-haul trucks will greatly increase. Currently there is being developed new lighter-weight, less expensive refrigeration equipment for these long-haul trucks," he added.

"Refrigerated storage facilities for frozen foods seem unlikely to undergo any appreciable change in the near future. Cold storage facilities have been expanded greatly in the past four years, with an estimated 90,000,000 cu. ft. now available as compared to 50,000,000 cu. ft. reported for January, 1940.

"Probably one of the most interesting spots to watch in the commercial distribution channel after the war will be the final link in the chain—the retail store and home delivery," said Mr. Meek. "Before the war, there was only one serious attempt at specialty merchandising through home delivery, and that failed mainly because of a lack of frozen food storage facilities in the home.

(Concluded on Page 19, Column 1)

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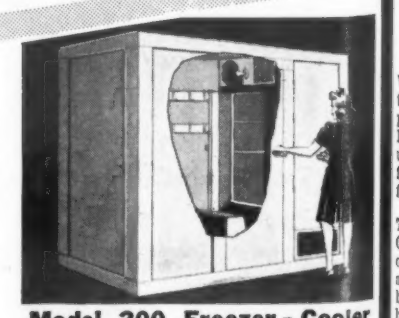

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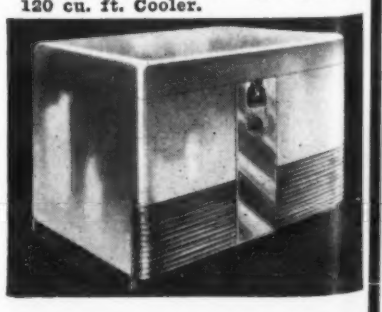


Many Factors Bear On Frozen Foods

(Concluded from Page 18, Column 5)

"But the fact remains that if frozen food sales to the consumer are to increase greatly, there must be a much more ambitious merchandising job done than has been the case in the past.

"Incidentally, the lack of frozen food storage facilities in the home will not be met by any one type of frozen food cabinet. Some families will want a small storage chest to use in conjunction with their present refrigerator; and still others will want various types and sizes of home and farm freezers. However, by all odds the greatest seller is certain to be the two-temperature refrigerator.

"But here let me sound a note of caution—A tremendous amount of technical advancement must still take place:

"(a) before the two-temperature refrigerator becomes an entirely satisfactory item for mass production at a reasonable price;

"(b) before it reaches a point where it gives reasonable customer satisfaction;

"(c) before it will maintain a temperature in the frozen food compartment low enough to protect the high quality of the frozen food."

HOW MARKET BREAKS DOWN

The prewar markets for frozen foods may be broken down under three general classifications, as shown at the right of Chart C, Mr. Meek explained.

1. Retail, composed of retail stores and perhaps, in the near future, home delivery, probably 30% of the total;

2. Institutional, including restaurants, hotels, hospitals, etc., probably 25% of the total;

3. Industrial, such as ice cream manufacturers, jam and jelly manufacturers and commercial bakers, probably 45% of the total.

"It is expected that postwar the proportion of the pack going to each market will remain about the same, with the exception of a possible gain percentagewise in retail sales. This will depend largely on the extent to which home delivery of frozen foods is successfully developed."

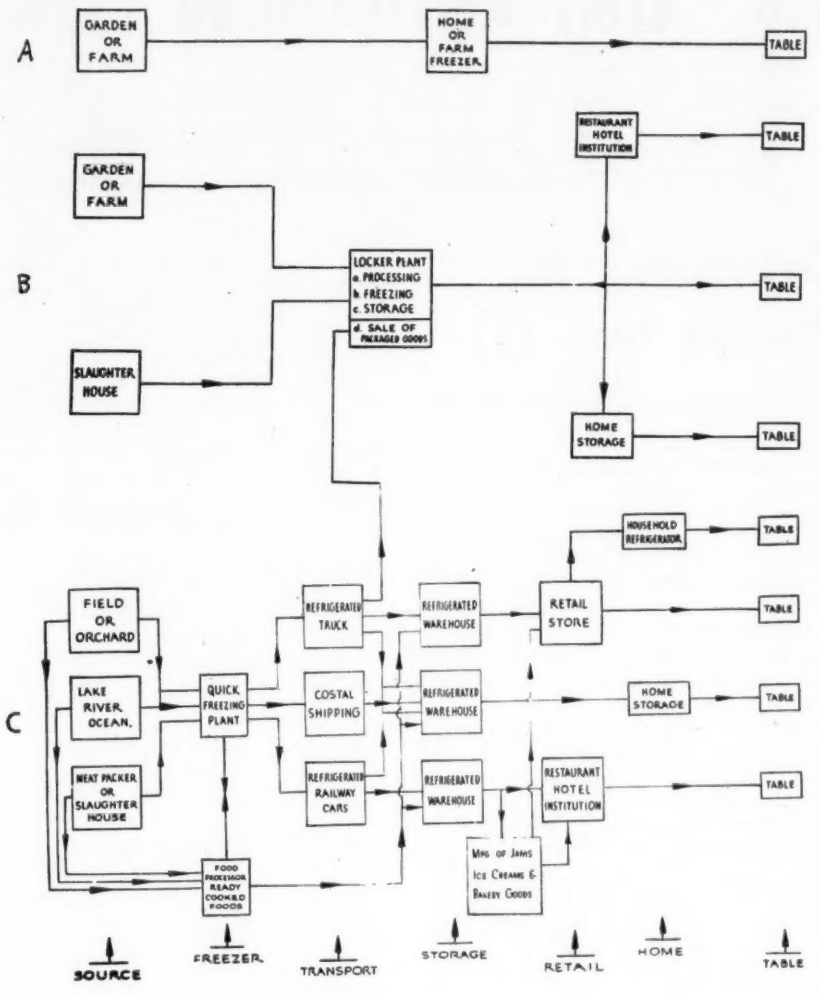
"During this last year, roughly half of the frozen fruit and vegetable production has gone to the military, thereby creating a terrific demand for portable overseas refrigeration. One company alone has built over 16,000 3-hp. packaged refrigeration assemblies for cooling large walk-in type frozen food storage rooms.

"Incidentally, this exposure of the men in the army and navy to frozen foods will be bound to create an appetite in them which will only be satisfied by frozen foods when they return to civilian life. (This is in strong contrast to the soldier's probably permanent revulsion toward dehydrated foods.)

"Interestingly enough, the advancing Allied armies in Europe have found that the German army made widespread use of frozen foods.

"Up until this time, the majority of the frozen food poundage has been in fruits and vegetables. The prewar sales of eviscerated poultry, meat, and seafood will expand."

'Flow Chart' of Frozen Foods Distribution



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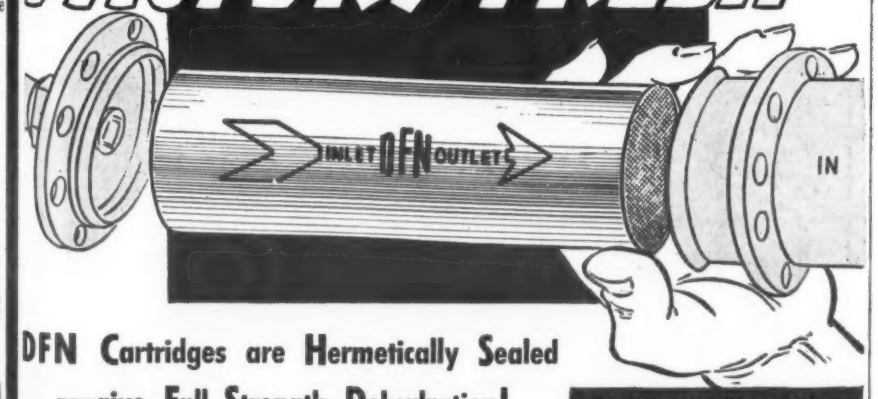

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Army Refrigeration Problems

By P. B. Reed

Manager, Refrigeration and Air Conditioning Division, Perfex Corp.

Determining the Product Load (2)

LATENT LOAD OF THE PRODUCT

In the foregoing we have been considering the cooling of the product through the sensible heat range only, and without a change of slate or form. This is quite correct *unless* the preservation of the food involves freezing in addition to storage only. Freezing requires much greater refrigeration capacities of the equipment than ordinary "above-freezing" storage.

Take water, for example. To cool a gallon of water from 70° to 40° requires a cooling effect of (30 × 8⅓) 250 B.t.u. (A gallon of water weighs 8⅓ pounds.)

If we want to freeze the water we must first cool it on down to 32° F. (40 − 32°) × 8⅓, which requires the removal of 67 B.t.u. To freeze the gallon of water then requires 8⅓ × 144 = 1,200 B.t.u. So to cool a gallon of water from 70° down to freezing and then freeze it requires 1,517 B.t.u.

LATENT LOAD OF FREEZING BEEF

Take 10 pounds of average beef in a cooler at 40°. To cool it to 32° will require the removal of 10 × 8 × .74 (the specific heat of beef above freezing) = 59 B.t.u.

To freeze the 10 pounds of beef requires 10 × 98 (latent heat of fusion of beef) = 980 B.t.u. Then to pull it on down to 0°, the temperature at which it will be stored, will require the removal of 129 B.t.u., (10 × 32 − 0°) × .404 (specific heat of frozen beef). Thus a total of 1,168 B.t.u. to chill 10 pounds of beef from 40° to freezing and then down to a storage temperature of 0° F.

LATENT HEAT COMPARED TO SENSIBLE HEAT

It will be noticed that the latent heat of freezing is very high as compared to the sensible heat. Therefore it is very important that if the equipment is to be designed for *freezing* the product in addition to storing it, care must be taken to include the freezing load in the product load; or if the equipment is *not* designed for freezing foods, liquids, or other products, but for *storage only* either above or below freezing, then the user must understand this and not attempt to use storage equipment as freezing equipment.

A frozen food *storage* cabinet might be quite satisfactory with a ⅓-hp. unit (heat leakage and service loads only, no product load) but if that same cabinet were to be used for freezing foods as well as storing them, then a ¾-hp. unit and a large coil might be required.

To determine the total load of a freezing cabinet, the amount of product to be frozen per 24 hours must be determined also in how large batches the food is put in the freezer and how warm the food is when it goes into the cabinet. This data must be rather accurate for an error that, in the higher storage temperatures, might amount to very little, would, in low-temperature freezing, make a very great difference.

HEAT OF EVOLUTION

Another factor that must be taken into consideration when computing product load is the "heat respiration" of some foods, particularly fruits and vegetables. These foods give off heat in ripening or otherwise slightly changing their composition.

In ordinary small reach-in or walk-in coolers the food is mixed and the amount of these foods is not enough to require that this factor be considered, but in some installations, such as apple storage rooms, banana ripening rooms, etc., the respiration factor is quite important and must be considered and included in the estimated load along with other forms of product load.

It is figured in much the same manner as specific heat, for example: 500 pounds of fresh peaches give off about 1 B.t.u. per pound per 24 hours when stored at 40° F. or 500 B.t.u. for the 500 pounds. This must be added to the other product load to make up the total. This would not have to be considered for it would be a small factor compared to the heat leakage load, the balance of the product load, and the service or usage load.

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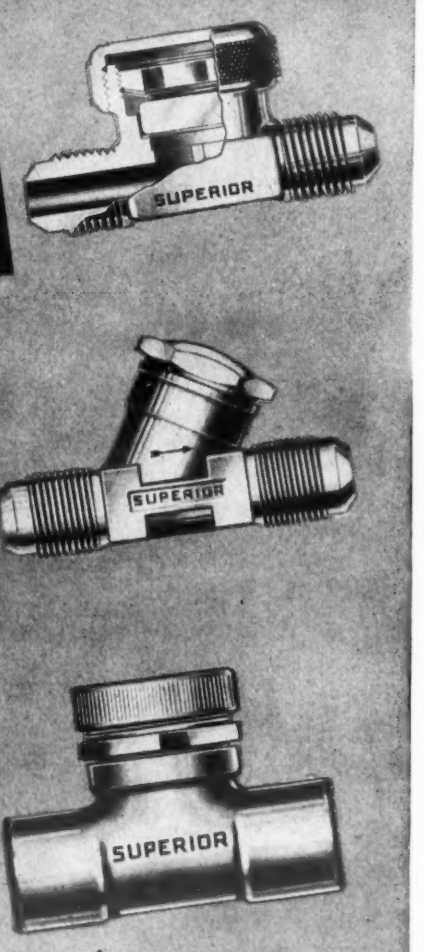

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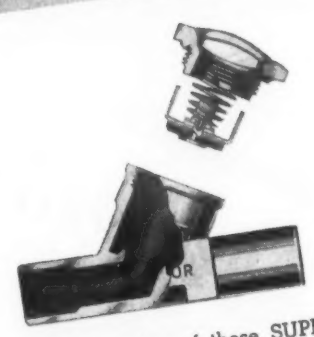

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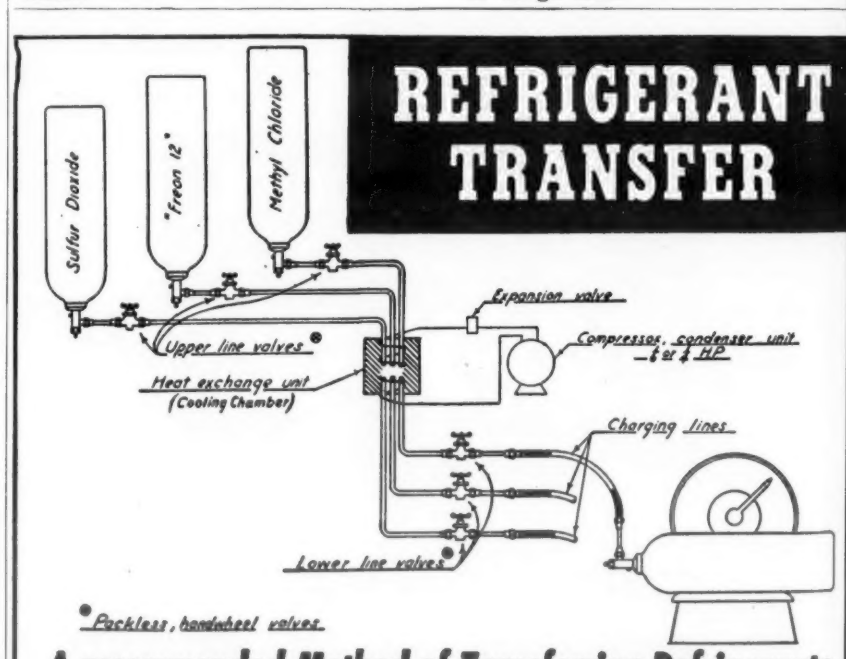

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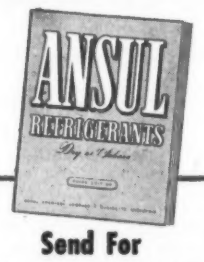

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Much Refrigeration Needed at Hawaiian Post

H. L. Meeks, civilian employe of a large military station somewhere in Hawaii, and T/4 Wallace Lindsay, U. S. Army, check operation of a defrost valve on fan-coil units operating in a large refrigerated warehouse.

• • •

Refrigeration Operator at Hawaiian Camp Cites Control Problems on Multiple Jobs

HAWAIIAN ISLANDS (Special)—Servicing and maintaining refrigeration equipment on a large military post is not all beer and skittles in the opinion of H. R. Vaughn, who has had this responsibility here for more years than he likes to count. A civilian employe of the post, Mr. Vaughn operates a crew of eight experienced service men who handle all refrigeration on the reservation, once it has been installed.

This equipment includes many types of air conditioning, all kinds of commercial and industrial refrigeration, from ammonia ice plants to reach-in refrigerators, and countless household boxes of all makes.

Mr. Vaughn is an exponent of small machines and unitary refrigeration equipment, but believes that care must be taken in designing the installation, particularly the control system. He cites the case of a large refrigerated warehouse on post that is used for the storage of frozen meat and food, as well as perishables, including butter, eggs, fruit, vegetables, and occasionally fresh meats.

This building, of the standard army warehouse type, is divided into eight separate sections, each equipped with six General Electric commercial refrigeration machines. The compressors are mounted on the concrete floor in "lean-to" rooms located behind each section of the great warehouse.

The refrigerant is piped to individual fan-coil units in the refrigerated spaces, which consist of a large ante-room at the front, where a temperature of 35° F. is maintained, and the large storage rooms which are maintained at 12° F. to 15° F. The ante-room has two fan coil units, and the inner storage room four low sides. The individual coils are each connected to a single compressor.

When the job was first installed, each refrigeration circuit was operated by means of an individual thermostat. This was far from satisfactory, Mr. Vaughn points out, as it was impossible to regulate the operation of the various machines. Part of the compressors would run all the time and others would seldom, if ever, start.

At present, each section of the building is operated by one thermostat which controls the electric supply to the compressors. Operation of the machines is controlled by a pressure regulating valve which maintains a constant pressure in the various refrigerant circuits. Mr. Vaughn has found that this arrangement is much more satisfactory than the original control system. Proof of the successful operation is found in reading a series of thermometers located in various sections of the building. These instruments show that the ante-rooms are held at 35° F. and the storage rooms hold temperatures from 12° F. to 15° F., depending on the type of perishables stored.

Another problem in the operation of this equipment is found in the fact that the large doors on the front of the building are often kept open for excessive periods of time when merchandise is being moved in and out of the building. This practice permits warm moist air to flow over the fan-coil units, making frequent defrosting necessary. The system employs water defrosting, manually operated. Coils are defrosted daily.

Mr. Vaughn does not like to remember the time a native employe, who did not understand exactly what it was all about, failed to drain the defrost drain pipes under the floor of the building, thus permitting the pipes to freeze. Digging up the pipes out of the concrete floor was an experience Mr. Vaughn and his men will not soon forget.

Associated with Mr. Vaughn on service work are Kenneth Clemens, Robert Ruggs, Don Kelso, Alden Mahaula, Harold Meeks, and Masato Koymatsu. Men handling the operation of installed equipment include James Amati, Hiruko Tomio, Herbert M. McMillan, Ted N. Akoda, and Thomas T. Sato. Miss Rose Nambu is secretary to the department.

Septer In New Radio Tube Post With Westinghouse

SUNBURY, Pa.—L. E. Septer, a former Westinghouse sales executive and for the past five years assistant sales manager in charge of the replacement tube division of Ken-Rad Tube & Lamp Corp., has been appointed manager of replacement tube sales for the Home Radio Division, Westinghouse Electric Corp., announces Harold B. Donley, division manager.

Mr. Septer has been in electrical appliance and radio tube merchandising for 17 years, having started in 1928 as a salesman for the Ohio Power Co. with headquarters in Coshocton, Ohio.

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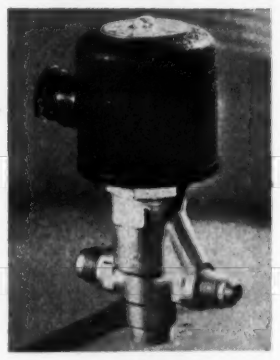

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DU PONT METHYL CHLORIDE SPECIFICATIONS

Purity	99.5% Methyl Chloride
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Acid as (HCl)	0.001% by wgt. max.
Residue on Evaporation	0.01% by wgt. max.
Boiling Range (760mm)	—24.6° to—23.6°C.
Color	water white, clear

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Refrigeration engineers know that TZ will do the job either as a moisture preventive or cure, but the Noahs of the profession meet the problem before it arises. They inoculate new and reconditioned units with TZ.

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Servicing Frigidaire Meter-Miser Units

Editor's Note: Continuing its series of illustrated articles giving detailed information on the servicing of Frigidaire household refrigerators, AIR CONDITIONING & REFRIGERATION NEWS this week presents the first instalment of service methods for the Meter-Miser system, the sealed rotary type unit produced by Frigidaire.

This series, as was the preceding one on the open-type reciprocating unit, was prepared through the cooperation of the service department of Frigidaire Division, General Motors Corp., so the information presented may be considered as official and authentic.

Instalment No. 1

1—Frigidaire's Meter-Miser

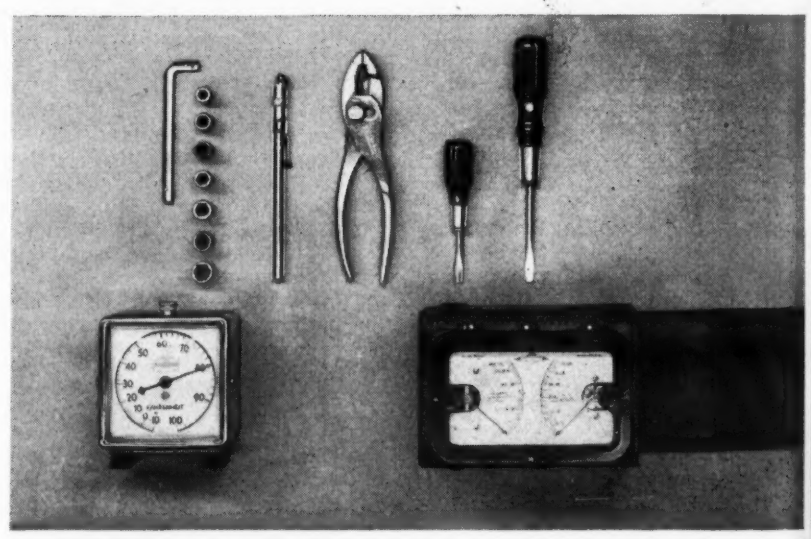
The compressor of the Meter-Miser is of the simple rotary type, with only two parts that move—the Impeller and Divider Block. The Impeller is driven around and around inside the cylinder by the Eccentric on the end of the motor rotor shaft.

Oiling of the Meter-Miser is accomplished without the use of a separate oil pump. A lifetime supply of oil is sealed in the steel housing at the time of manufacture, and the rapid rotation of the motor shaft automatically forces oil upward through the spiral groove to all parts requiring lubrication.

In late models, a series of tubes with cross-fins rapidly carry away the heat from the compressed refrigerant vapor. In earlier models, the condenser is located on the back of the cabinet and consists of two flat plates welded together, with space in between for the refrigerant. Neither type contains any moving or wearing parts.

"F-114" refrigerant is used in the Meter-Miser. Chemical name is dichlorotetrafluoroethane. Colorless and odorless. In an open container at sea level, it boils or vaporizes at a temperature of 38.6° F.

2—The Easy Way to Diagnose and Service The Frigidaire Sealed Rotary System



Because the Frigidaire household rotary system is sealed, many dealers and service men have felt that service adjustments could not be made in the home.

As a result, customer complaints have often ended in complete replacement of the unit instead of a simple adjustment. But contrary to what one might think, sealed rotary service is easy to handle.

In fact, a dial thermometer, pocket thermometer, combination volt and watt-meter, pliers, large and small screwdrivers, a set of socket wrenches, and a test cord are all the items needed to render complete and efficient service on Meter-Miser units.

If desired, a separate volt-meter and watt-meter can be used, instead of the combination meter shown.

A good doctor would not try to diagnose an illness without using his instruments. If he did, he might prescribe medicine for one illness while the patient might die from another.

The same thinking applies to sealed rotary service. If we do not use our instruments to help us diagnose the trouble, we may think one thing is wrong whereas something entirely different is causing the difficulty.

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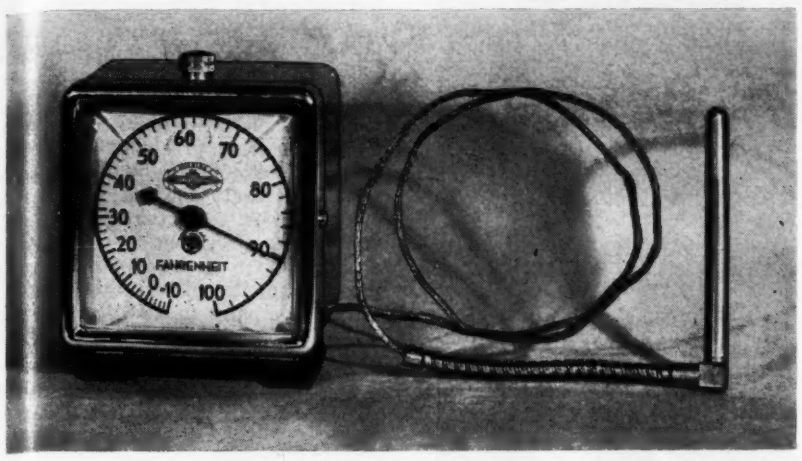
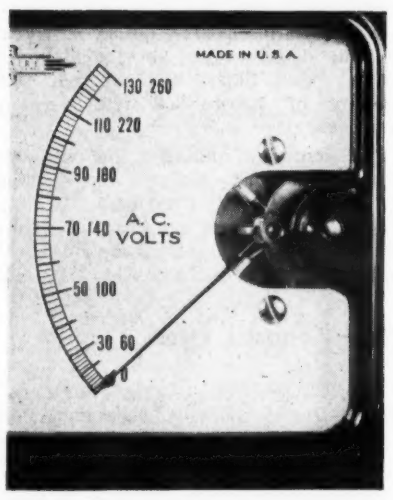
Servicing Meter-Miser Systems

3—The Dial Thermometer Is Necessary For Diagnosing Certain Complaints



Just as the temperature of the patient gives an indication of what the illness may be, so does the temperature of the freezer give an indication of what the difficulty may be. For example, it may be improper switch setting, or the trouble may be within the unit.

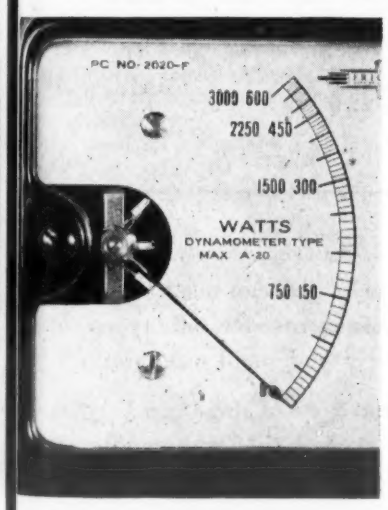
4—The Volt-Meter Is Used to Check Line Voltage and Line Voltage Drop



Because the Meter-Miser motor is designed to operate on 115 V., A.C., line voltages and voltage drop have quite an effect on its operation.

A line voltage drop in excess of 10% of 115 volts slows down motor acceleration and the relay timing device. This causes the motor to stall occasionally, resulting in refrigeration complaints.

5—Watt-Meter Is Used to Make 'No Load' Test, Check Relay, and Identify Noises



Because motor operating wattages vary with certain internal troubles, the "No Load" Test is one of the most important to make in connection with sealed rotary service.

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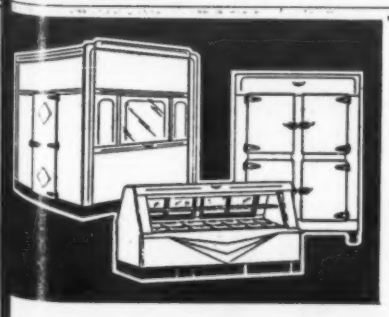

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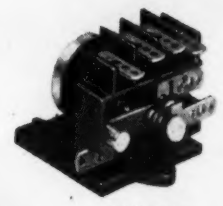

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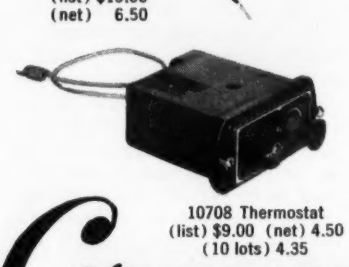

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This protection is made possible by the fact that AVRGAIRE . . . is operated by the *average temperature* of both coil and air. Thus, it maintains extremely close regulation of box temperature. This low-cost, highly efficient control defrosts the coil on each operating cycle when the box load is normal. However, let the box be loaded with warm produce and extra cooling capacity be needed . . . then AVRGAIRE *delays the defrosting.* In addition, it maintains uniform humidity to minimize dehydration and "sliming" losses.

So make sure that your refrigeration controls give your installations complete protection . . . use AVRGAIRE. The whole story is yours for the asking . . . complete with pictures and diagrams. Write *Penn Electric Switch Co., Goshen, Ind.* Export Division: 13 E. 40th Street, New York 16, U.S.A. In Canada: Powerlite Devices, Ltd., Toronto, Ontario.

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AUTOMATIC CONTROLS
FOR HEATING, REFRIGERATION, AIR CONDITIONING, ENGINES, PUMPS AND AIR COMPRESSORS

Admiral Service Head

MAX J. SCHINKE

Has been appointed service manager for all products of Admiral Corp.

Willis Marshall Joins American Central Corp.

CONNERSVILLE, Ind.—Willis M. Marshall has been appointed northeastern district sales manager for the American Central Mfg. Corp.

A native of Denver, Col., Mr. Marshall has been associated with the Horton Mfg. Co. of Ft. Wayne for the past nine years. He was parts and service manager when he left to join the American Central organization.

8 Ft. Refrigerators Prove Most Popular In Survey, Indianapolis Store Finds

INDIANAPOLIS—The problem of how much floor space should be devoted to major appliance retailing during the postwar period has been largely solved at Wm. H. Block Co. here through a "postcard survey"—which determined approximately which appliances regular customers would be most anxious to buy.

Formerly operating one of the city's largest appliance departments, the Block store is planning additions of several other lines of merchandise in the same space following the war. Consequently, it was important to ascertain the demand for each type; particularly the bulkier major appliances.

Five thousand postcards, carefully explaining that the store would use the information in setting up both small appliance and major appliance departments, were sent out to charge customers on the books for two years or more. Each asked the customer to indicate which appliances they would buy immediately after the war's end, explaining that no door-to-door solicitation would be involved.

More than 500 of the cards were returned within two weeks (an unusually high return on such a venture) demonstrating that the average housewife is deeply concerned over the future of her kitchen. From the returns after tabulating, it was found that electric mixers ranked first, with 110 women choosing them, and new refrigerators, 8-cu. ft. models most desired, second with 98. Vacuum cleaners were checked by 97 women, enough to indicate to Block's the wisdom of maintaining its large separate vacuum cleaner shop. In fourth place were washing machines with 84 cards.

Home freezers, still comparatively new on the market, were the choice of 65 women. From 55 to 60 women checked sewing machines, 41 table radios, and 39 electric ranges. From these figures the list went on down the scale through toasters, gas ranges, phonographs, etc., to electric blankets and water heaters.

Results indicated the demand about equally split between major appliances and small appliances, with the result that the Block store will design its postwar appliance merchandising around a central major appliance display. From this will radiate compact smaller shops for all types of small appliances—on the theory that housewives attracted by refrigerators, ranges, or washing machines will find all related small appliances only a few steps away.

Kelvinator Ups McPherson, Rochford, and Fowler in New Jersey District

NEWARK, N. J.—R. B. McPherson has been named household sales manager for the Kelvinator division of Nash-Kelvinator in New Jersey, K. L. Saunders, New York zone manager, recently announced.

Mr. McPherson has been with Kelvinator for eight years, nearly all of which was spent in sales activities in the New Jersey area.

R. J. Rochford, active in New Jersey Kelvinator appliance sales for the last 17 years, has been named district manager of the northern part of the New Jersey territory under the New York zone.

William S. Fowler will be district manager of the southern New Jersey territory.

Spencer Manages Norge Southeastern District

DEAN SPENCER

DETROIT — Dean Spencer has been appointed southeast regional manager of the Norge division of Borg-Warner Corp. and will have his headquarters in Atlanta, Ga.

Mr. Spencer has been field service superintendent since 1942 and was in charge of service operations in New York and Chicago. His first affiliation with the line was in 1931 when he joined the Norge distributor in Oklahoma City, Okla., to work in the distributor's service department. In 1939, he entered the employ of Norge as field service representative.

As regional manager he will be responsible for Norge distribution in territories of Charlotte, N. C., Charleston, S. C., Atlanta, Ga., Jacksonville, Fla., and Johnson City, Chattanooga and Knoxville, Tenn.

New Kenosha Firm

MADISON, Wis.—Long Refrigeration Sales & Service, Kenosha, has filed articles of incorporation in the secretary of state's office here.

Top Executives Promoted By Cutler-Hammer

MILWAUKEE—Election of F. R. Bacon as board chairman, H. F. Vogt as chairman of the executive committee, and G. S. Crane as president, and several other promotions among top executives have been announced by Cutler-Hammer, Inc., motor control manufacturer here.

Mr. Bacon, who founded the company, has been president since 1896, with the exception of seven years from 1924 to 1931 when he served as chairman of the board with E. L. Worden as president.

Mr. Vogt, who will continue as vice president, will also be treasurer of the company in addition to heading the executive committee, which includes Mr. Bacon and Mr. Crane.

The new president of Cutler-Hammer, Mr. Crane, was formerly vice president in charge of sales and engineering.

J. C. Wilson is vice president and secretary of the company.

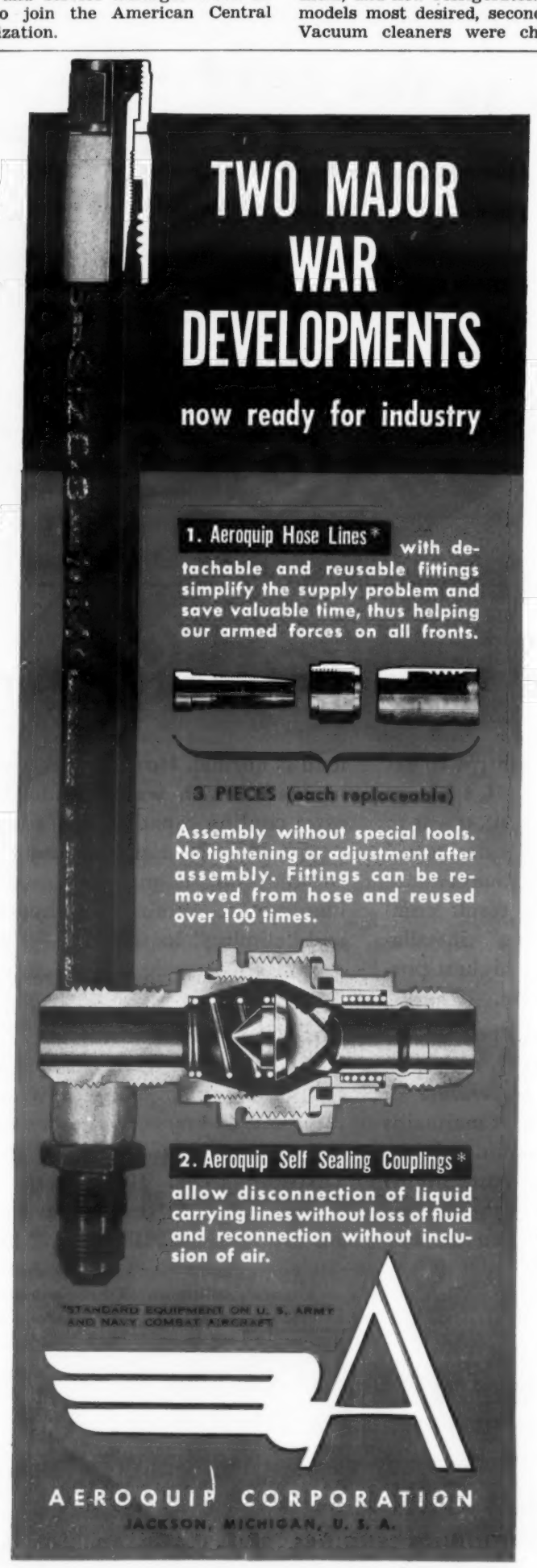
The following additional officers were elected: P. B. Harwood, vice president in charge of engineering; P. S. Jones, vice president in charge of sales; Philip Ryan, vice president in charge of manufacturing; E. W. Seeger, vice president in charge of development, and assistant secretary; M. R. Fenno (auditor), assistant treasurer; and J. C. Springer (manager of credit and collections), assistant secretary.

Warner Directs Purchases For Crosley Corp.

CINCINNATI—Frank W. Warner has been appointed director of purchases, manufacturing division, The Crosley Corp., to succeed J. E. Lautsbaugh, who resigned.

Mr. Warner, who had been assistant director of purchases, came to the Crosley Corp. about four years ago from United Wallpaper Factories in Chicago, where he had served as director of purchases for two years.

Previous to that time he had been assistant purchasing agent for the Nash-Kelvinator Corp. for about 18 years.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now ready for industry
1. Aeroquip Hose Lines* with detachable and reusable fittings simplify the supply problem and save valuable time, thus helping our armed forces on all fronts.
3 PIECES (each replaceable)
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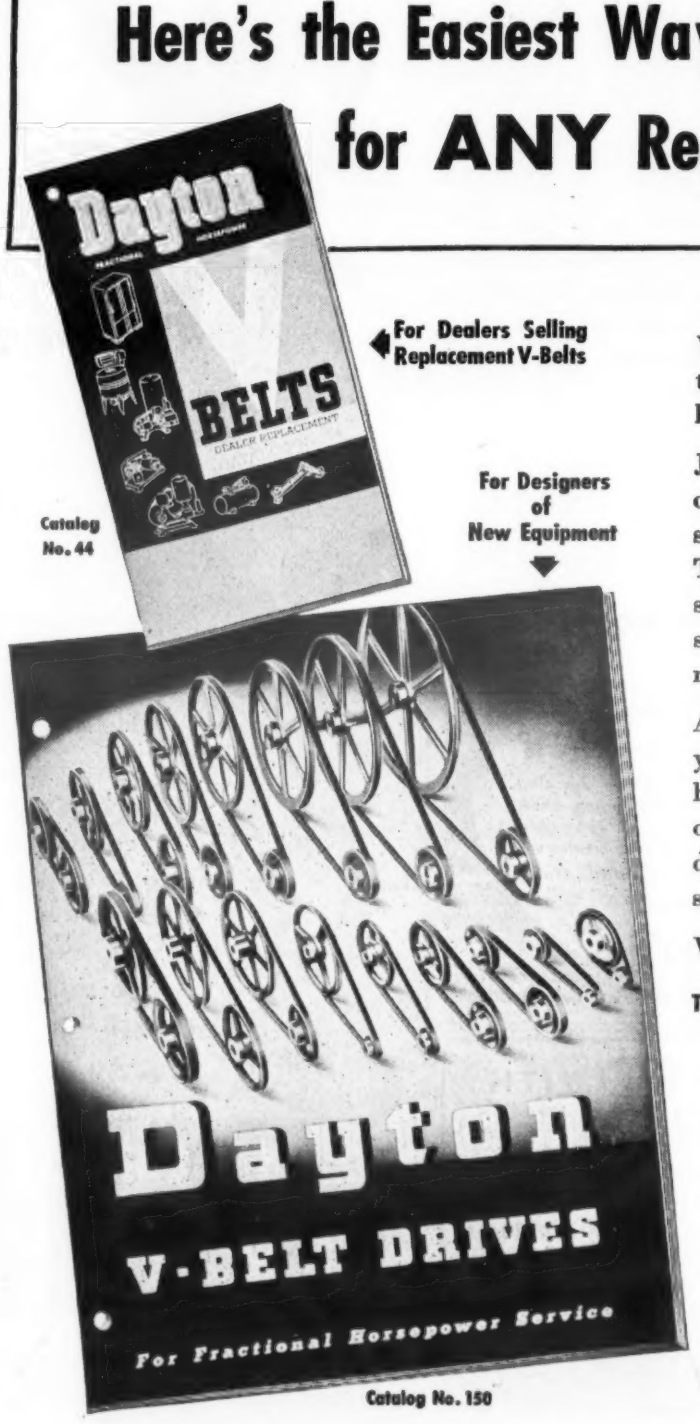
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Frozen Pies Made 'Practically In the Orchard' Is Plan of Dunkirk, N.Y. Business Man

Method of Freezing the Whole Pie Instead of Just Using Frozen Fruits Was Discovered by Accident

DUNKIRK, N. Y. — A booming frozen pie business in Western New York is forecast by William W. Cease, operator of the Cease Commissary Service here, who plans to open five branch plants in the various local fruit sections, which means the frozen pie virtually will be made in the orchard where the fruit is picked.

Pies will roll off the assembly line at the rate of 25 a minute. Mr. Cease already has this machine, which will enable him to make 35,000 pies a day.

It was through Mr. Cease's efforts to produce a quality food product that he got his deluxe pie machine. During prewar days, all pies were made by hand in the Cease Commissary Service. With the coming of war work to this area, business increased greatly and Mr. Cease was forced to resort to machinery.

Mr. Cease learned of a machine which mixes the dough with giant feelers and makes a much better crust than the ones which pound or whirl the dough. But there was a hitch. The feeler type machine is made only in Switzerland and already Germany had blockaded that country.

The United States Government allowed him to pay a German agency $500 to get the machine out of Switzerland. Upon arrival in this country Uncle Sam removed the waterproof ballbearing motor and replaced it with an American motor.

HOW IDEA WAS DISCOVERED

The machine turned out pie crust as specified, but the stuff was leathery and tough. Mr. Cease began to experiment and finally decided it was the water which made the crust tough. Without water, however, the dough could not be rolled.

He then hit on the idea of using refrigeration for dehydration, and rigged up an oven with a refrigeration unit. Moisture was drawn off and frost settled on the coils. The stunt worked and the "refrigerated" pie had a flaky tender crust. It was by forgetting one of the pies in the unit that Mr. Cease's frozen pie came into being.

"While I was experimenting with it," said Mr. Cease, "reports began coming in from all over the country of the discovery of the frozen pie. I hopped right to it and got a patent."

ADVANTAGES ARE OUTLINED

While using frozen fruit for pies is old stuff, the new method of putting the fruit right in the unbaked crust has a number of advantages. In the old process the fruit is picked, taken to a processing plant, washed, and packed in 30 pound drums with 5 pounds of sugar to 25 pounds of fruit. For especially large users it is packed in barrels.

The sugar immediately begins drawing off the juice and this process is increased in the trip to the freezing plant. Waiting in coolers anywhere from two days to two weeks before freezing also draws off juice. Thawing takes off more juice, until by the time the fruit is put in the pie it is almost deflated.

In the frozen pie the fruit will be taken from the orchard to the processing plant, washed, dumped in the crust, sugar added, and frozen immediately.

"It even has one advantage over the home-made fresh fruit pie," said Mr. Cease. "It won't boil over in the oven. Because it is so solidly frozen, the crust bakes before the center fruit has thawed. Freezing the crust insures tenderness, and the berries retain their shape."

If the frozen pie goes over as well as expected, it will be a boon not only to the housewife, but to the fruit farmer, said Mr. Cease.

The Cease Commissary Service now employs 450 persons and the plant has a 14½ acre site. Recently it acquired a Dunkirk ice cream plant for freezing purposes.

B & M Co. Is Formed

LOS ANGELES—B.&M. Refrigeration Service is the firm name under which Mike Kuntz and Bob Schmotter have published a certificate that they are conducting business at 6034 York Blvd., Highland Park, Los Angeles, Calif.

Hedrick Directs Mills Distributor Sales

HARRISON HEDRICK

* * *

CHICAGO—Harrison H. Hedrick's promotion to manager of distributor sales and the appointment of Matt Hogan as his assistant have been announced by Sterling Smith, manager of the refrigeration division of Mills Industries, Inc., here.

Mr. Hedrick formerly assisted Mr. Smith as second in command of the refrigeration division, while Mr. Hogan previously managed the commercial sales division, metropolitan Chicago area, for Westinghouse Electric Corp.

First Produce Called Best For Freezing

BRIDGEPORT, Conn. — First-of-the-season vegetables are usually more preferable for freezing, advises Dr. Donald K. Tressler, Foods Consultant to the General Electric Co.

Early summer vegetables grow very rapidly because of the long hours of sunlight and the moist soil ordinarily found at that season of the year. These conditions usually produce vegetables which are of a very high quality. Their color and texture is often superior to those harvested later in the season.

Since the quality of the frozen product is dependent largely upon the quality of the vegetable selected for freezing, it is wise to freeze first-of-the-season vegetables, says Dr. Tressler.

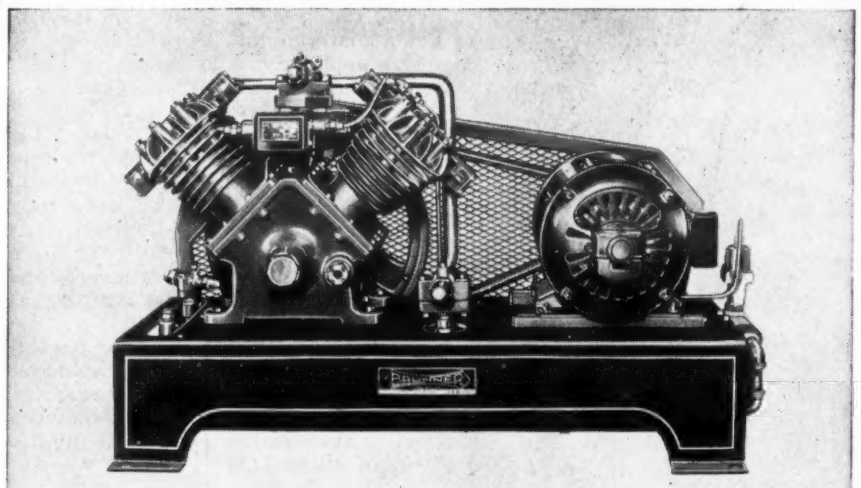
Pick vegetables for freezing at the same stage as for cooking—when they are at peak perfection. Spinach, peas, Swiss chard, beet greens, and other greens give especially desirable frozen products. Peas are one of the most popular frozen foods.

New Plant To Freeze Figs and Nectarines

MERCED, Calif.—Figs, nectarines, peaches, and other fruits which have seldom been successfully frozen in this area in the past will form the output of a new quick freezing plant now under construction here. Built entirely of prefabricated steel, the super-capacity plant will be in operation by the end of July, and will be under supervision of the Yosemite Growers Cooperative Association.

The new plant, located on the Kadota Fig Association grounds near Merced, is designated to serve the armed forces for the next two years, according to the association, which is headed by E. F. Hadley, Martin Hadley, Elmer Wood, and R. D. Leuschner.

There will be a variety of quick freezing chambers all the way from -10° F. to 45° F., according to Mr. Hadley, with as many storage coolers and precooling rooms as there will be varieties of fruits and other produce handled.



Your refrigerated case is only as good as its condensing unit

Regardless of beauty of design—streamlining—or modern lighting—the utility of refrigerated show cases is only as efficient as their condensing units. So, if you are contemplating the purchase of refrigerated show cases, make sure that they are equipped with reliable, proper capacity condensing units—Brunner Condensing Units! Brunner Units are backed by 37 years of specialized experience in the design and production of compressors. Thousands of Brunner Condensing Units are giving efficient and economical service not only in our country, but all over the world. And small wonder, look at how they are made!

Following its assembly, every Brunner Compressor is run for 24 hours in an air-conditioned room and then disassembled and every part inspected. It is then reassembled and tested again.

Initially only the finest materials are used and the closest tolerances are maintained in their manufacture.

Brunnner engineering has not only kept pace with improvements in the industry, it has, in fact, set the pace! Brunner cooperates with case and cabinet manufacturers enabling them to adopt many modern improvements in design and utility of modern cases and cabinets.

Whether you are now prepared to place an order or are contemplating a post-war purchase of a refrigerated show case or cabinet, remember that its efficiency, reliability and economy depend upon its refrigeration condensing unit. Specify Brunner Condensing Units and be sure of a cabinet or case that will give you many years of reliable and economical operation.

WRITE FOR CATALOG

Due to the paper shortage we will not issue a catalog in 1945

SERVICE PARTS CO.
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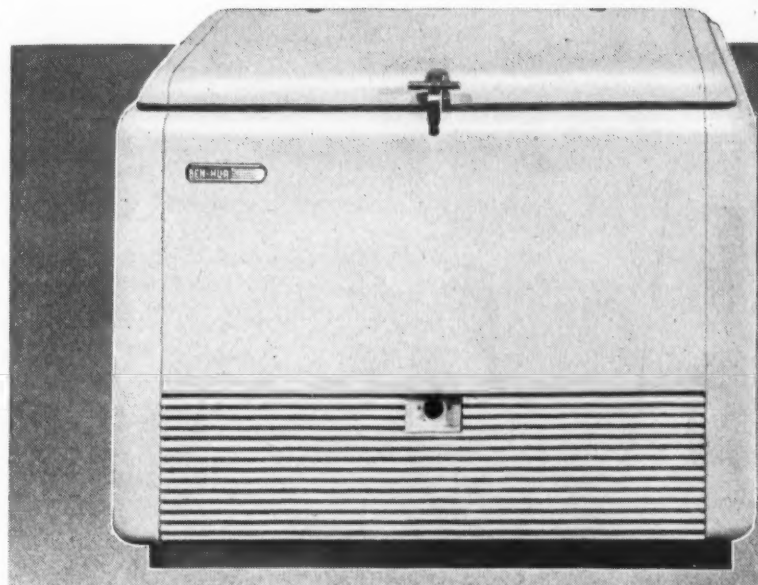

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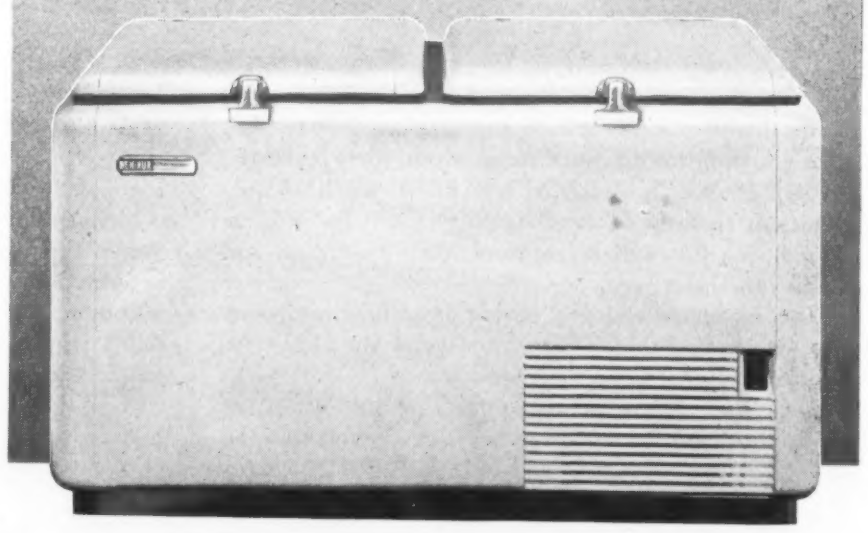
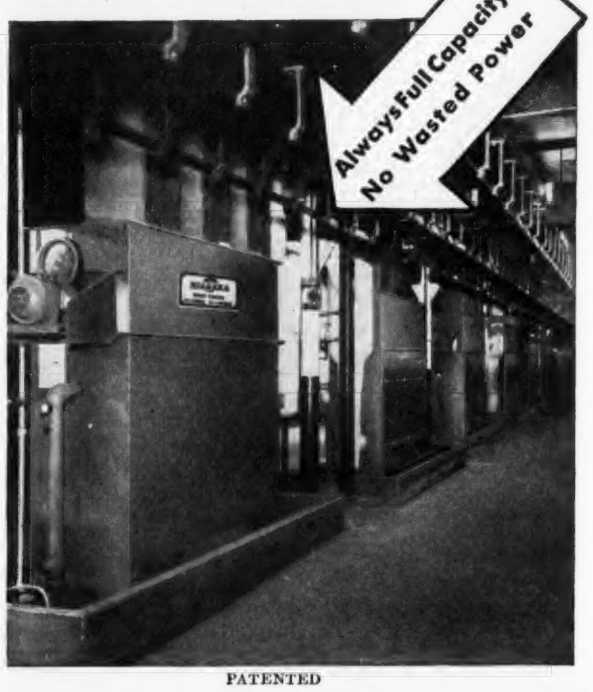


BEN-HUR FARM & HOME FREEZERS

NIAGARA "No-Frost" METHOD



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● Users of the NIAGARA "No-Frost" Method have better protection of quality in fresh or frozen foods, and save power and avoid troubles in operation.

1. Always uniform and full production capacity.
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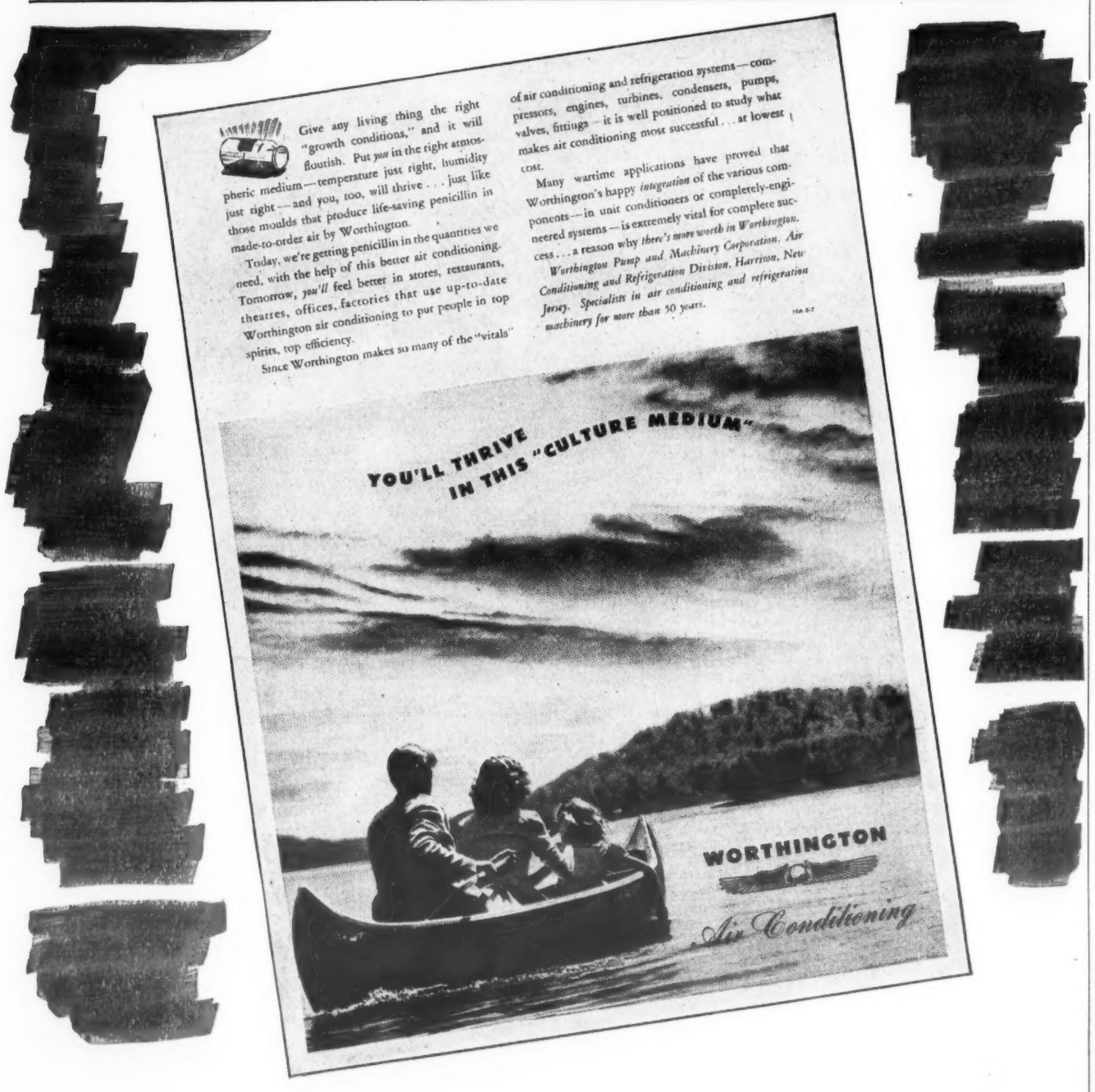
Give any living thing the right "growth conditions," and it will flourish. Put *you* in the right atmospheric medium — temperature just right, humidity just right — and you, too, will thrive . . . just like those moulds that produce life-saving penicillin in made-to-order air by Worthington.
Today, we're getting penicillin in the quantities we need, with the help of this better air conditioning. Tomorrow, *you'll* feel better in stores, restaurants, theatres, offices, factories that use up-to-date Worthington air conditioning to put people in top spirits, top efficiency.
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Many wartime applications have proved that Worthington's happy *integration* of the various components — in unit conditioners or completely-engineered systems — is extremely vital for complete success . . . a reason why *there's more worth in Worthington*. *Worthington Pump and Machinery Corporation, Air Conditioning and Refrigeration Division, Harrison, New Jersey. Specialists in air conditioning and refrigeration machinery for more than 50 years.*
AS-87
YOU'LL THRIVE IN THIS "CULTURE MEDIUM"
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Air Conditioning

"You'll thrive in this culture medium" is part of a message Worthington delivered recently to readers of TIME, BUSINESS WEEK and WALL STREET JOURNAL to point out that the air conditioning that helps produce better penicillin will make them, their customers and employees thrive, too.

Your business — buying, selling, installing, or operating air conditioning — can also thrive on up-to-date Worthington Air Conditioning.

Since Worthington makes so many of the "vitals" of air conditioning and refrigeration systems — compressors, engines, turbines, condensers, pumps, valves, fittings — it is well positioned to know what makes air conditioning most successful . . . at lowest cost.

Many wartime applications have proved that Worthington's happy *integration* of the various components — in unit conditioners or completely-engineered systems — is extremely vital for complete success . . . a reason why *there's more worth in Worthington* . . . for the buyer or dealer, contractor or engineer.

A get-together with a Worthington sales engineer costs nothing . . . is not binding. Let's talk things over.

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Worthington Pump and Machinery Corporation, Air Conditioning and Refrigeration Division, Harrison, N. J. Specialists in air conditioning and refrigeration machinery for over 50 years.

AS. 13

Factors to Consider in Selecting Correct Insulation for Jobs Outlined for A.S.R.E.

Engineer Urges Industry to Launch Program To Obtain More Data for Assisting Users

WASHINGTON, D. C. — A wide variety of forms of insulation, their advantages and shortcomings for various applications, were discussed in a paper presented by P. Edwin Thomas, mechanical engineer of Washington, before a recent meeting here of the Baltimore-Washington Section of the American Society of Refrigerating Engineers.

Mr. Thomas also explained some applicable fundamentals of physics, pointing out how they are often misunderstood or distorted. He then called on those responsible for the production and distribution of reliable insulating materials, as a part of our reconversion program, to develop and launch a program looking to the discovery and dissemination of additional information to potential users that will safeguard their interests and thus advance the interests of the manufacturers themselves.

CLASSES OF MATERIALS

Mr. Thomas divided cold storage insulating materials into two kinds (a) thermal insulation and (b) sound insulation, and into four classes (1) animal, (2) mineral, (3) chemical, and (4) vegetable. These classifications were further sub-divided into housing, industrial, air conditioning, food processing, and food preservation. These divisions are important, said the speaker, because an insulating material that is satisfactory for one application may not be satisfactory for another one, as service is a controlling factor.

Other considerations, asserted the speaker, are whether the structure to be insulated is (a) experimental and consequently to be used only through the life of the test, (b) temporary and so useful only for a few years, or (c) permanent and requiring insulation that will last as long as the building itself.

From the animal group of insulating materials, Mr. Thomas discussed hair as the outstanding example, though wool, eiderdown, feathers, silk, and leather have some limited applications.

HAIR AS INSULATION

From hair, we get the well-known hair felt, sold chiefly in blanket form, and used widely as an acoustic corrective material and also as insulation for homes and industrial buildings, both with protective coverings. It is also widely used as cold pipe and refrigerator car insulation. The K factor is from 0.24 to 0.26 when perfectly dry, but due to the oily nature of hair, it acts to repel water, but the air spaces are not cellular and water can permeate the entire mass.

In the field of minerals, Mr. Thomas said mineral wool occupies an important position, particularly in housing. Manufactured from rock, slag, or glass, it is available in loose granulated, felt and board form, and commercial specifications call for a K factor not to exceed 0.27 at a mean temperature of 50° F.

For cold storage insulation, loose wool is made into boards and compressed to standard shapes and to such a density for a K factor of approximately 0.33 at 75° F. Under these conditions, however, the speaker cautioned, its insulating value depends upon the air entrapped and remaining among the multitude of interlaced mineral fibers, and water can permeate the entire mass.

Commenting on the newest member of the mineral wool family, "Fiberglas," Mr. Thomas said that it is glass in the form of heretofore unknown fine fibers that look and feel like silk— a single fiber being almost invisible to the naked eye—and pliable enough to be woven into an all glass fabric that can be creased and folded. These fibers are microscopic thin glass rods, and because they have no cellular structure, their surfaces can be wet but moisture cannot get into the fibers.

This product is used for heat and home insulation, refrigerators, refrigerated trucks, ships, aeroplanes, etc., but does not appear to be of especial interest as cold storage insulation. It is, however, undoubtedly destined for a bright future in many other fields.

MOST IMPORTANT ADDITION

Perhaps, avers Mr. Thomas, the most important addition to the mineral family is "Foamglas," which is made from typical soda-lime glass with a small percentage of a carbon mixed in during the glass grinding process. This material consists of a mass of minute gas cells hermetically sealed in a tight rigid framework or matrix of glass, and, therefore, is claimed to be a truly complete vapor barrier, not subject to wetting by penetration, absorption or capillarity. It is recommended for thermal insulation over a range of temperature from - 75° F. to +700° F., for use in buildings and in many special building elements such as flues and ducts.

Tests of cold storage quality of "Foamglas," shows a K factor of .45 at 70° F., or about one half the efficiency of commonly used cold storage materials. However, it is claimed to be absolutely impervious to moisture, which means that it is not only waterproof but also vaporproof.

REFLECTIVE INSULATION

The speaker then proceeded to discuss reflective insulation including radiated electronic energy, explaining the difference between the reflection of light and heat by different substances. The characteristic of a metal that determines its ability to reflect radiant heat energy is claimed to be the particular grain or molecular structure of the surface.

It is not necessary, he said, for the surface to be polished or shiny as in the case of visible light. In fact some materials, optically dull, reflect more radiant heat energy than other highly polished. For example, stain

(Concluded on Page 27, Column 1)

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Properties of Mineral, Chemical, Vegetable Insulating Materials Are Discussed

(Concluded from Page 26, Column 5)

ess steel has a reflectivity of about 95% of radiant energy and Ferro-Therm, which is optically dull having, according to the manufacturer, a reflectivity of about 95% of radiant heat energy.

Nevertheless, cautioned Mr. Thomas, this does not mean that but 5% of the total heat passes through the barrier to the other side, because air spaces surrounding and in between these thin metal sheets have much to do with the actual overall insulating value of this type of material.

Other members of the mineral family discussed were Thermopane, a factory-built transparent insulating multiple glass unit for windows, and Vermiculite, a member of the mica family.

Turning to the chemical group, the speaker discussed the new products under the general name of "cellular synthetic rubber," manufactured from Buna S and Buna N synthetic rubber, being compounds of synthetic rubber and nitrogen. According to the rubber industry there are four types of this insulation, (1) Latex foam sponge, (2) chemically blown type, (3) bath sponge type, and (4) nitrogen blown or cellular insulating type.

In the vegetable field of insulating materials, Mr. Thomas discussed "Kapok" first used on a wide scale as filling for pillows and stuffing for bedding and furniture, and later in life preservers and life rafts.

It was finally employed as insulation chiefly in blanket and batt forms, in refrigerated trucks and later in aeroplanes, partly because of its light weight. The commercial product is known as "Dry Zero" and is made from the silky fiber contents of the many seeded pods of the ceiba tree. These Dry Zero batts have a K factor of 0.24 and the fibers are naturally water repellant, or non-hydroscopic, and it only weighs 1½ ounces per bd. foot.

Cotton insulation meeting the specifications of U. S. Department of Agriculture and War Food Administration, is made of well-cleaned, firmly matted, sound staple cotton fibers, became available in 1941 and stemmed from an urgent need to find uses for certain qualities of lint or virgin cotton.

It is extremely light in weight, possesses high insulation value when dry, is repellent to vermin and household pests. It should find a place in the insulation of homes and buildings, but its importance as cold storage insulation is questionable.

Other members of the vegetable family discussed by the speaker were: "Atoz," a mixture of finely ground pure cork bark, with a cement binder making it incombustible; Palco Wool; Celotex; and the familiar cork.

Cork, the speaker reminded his audience, is the outer bark of the famous cork oak, which is a native of Spain, Portugal, and North Africa, and has, of course, been widely and successfully used for many years, and its characteristics are well known to the industry.

In the discussion that followed the presentation of the paper, Mr. Thomas exhibited a variety of samples of different insulating materials. He also called attention to the fact that some manufacturers erred in making claims for their products, because the K-factors given were often for a 2-inch or a 4-inch thickness, instead of the basic 1-inch thickness.

The industry, he said, should unite on their recommendations for sealing materials.

Shad Heads Richmond Electric League

RICHMOND, Va.—A. B. Shad has been elected president of the Electrical League of Richmond.

Other officers for the ensuing year include: A. T. Hove of the C&P Telephone Co., vice president; M. D. Tetterton of the Virginia Electric & Power Co., treasurer; Walker C. Cottrell, secretary.

Chairmen of the standing committees for the new year are J. H. Stribling, finance; T. A. Keck, Jr., program and entertainment; A. H. Herrmann, publicity; W. W. Jones, attendance; C. F. Bennett, membership; L. L. Bond, business development; Marshall G. Fowlkes, standards. A. H. Herrmann and A. B. Schad are representatives of the League of the Inter-club council.

Konsier Plans Shop

HENDERSON, Ky.—Gordon Konsier, formerly chief refrigeration operator engineer at Kentucky's Camp Breckinridge, will open an electric refrigeration shop here soon.

Railroads Will Install Ultraviolet Lamps In Air Conditioned Cars

BLOOMFIELD, N. J.—Ultraviolet lamps will purify the air which postwar railroad passengers will breathe while riding along in air-conditioned cars.

Future plans of many railroad coach builders provide for installation in air conditioning ducts of the Sterilamp ultraviolet tube which emits the bacteria-killing rays, Charles W. Flood, manager of the Sterilamp department at the Westinghouse Lamp Division, Bloomfield, N. J., reports.

Outfitting of railroad coaches with the lamps was just getting under way when World War II intervened and the activity had to be abandoned. Among the first railroads to install ultraviolet was the Bangor & Aroostock Railroad in Maine.

From the air conditioning systems, the use of Sterilamps expanded to railroad commissaries, and cafe and dining cars. The Union Pacific Railroad, for example, placed the lamps in commissary refrigerators, retarding mold growth on meat and vegetables despite the raising of refrigerator temperatures. Later, lamps were placed over work tables in the railroad's Omaha (Neb.) commissary where 1,200 to 2,000 box lunches and 12,000 additional sandwiches are prepared daily.

Lamps have been installed in bar cars on the twin City of Denver streamliners and eventually will be placed on the road's entire fleet of streamliners, said H. I. Norris, assistant manager of the Union Pacific's dining car and hotel department.

How to control supply-air diffusion
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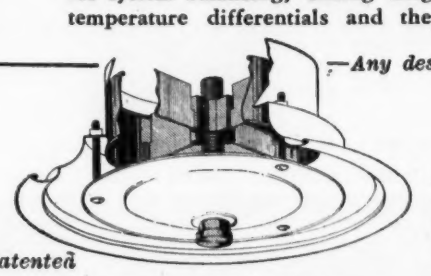

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Patented

By simply turning the air adjustment screws (easily accessible from under the unit), the inner cone may be raised or lowered to secure any angle of air direction required. The built-in volume damper (regulated by the hand-turning knob) varies the air outlet aperture uniformly without affecting the outlet velocity or diffusion pattern.

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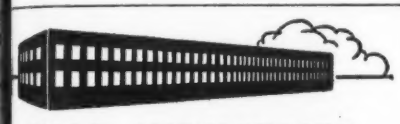

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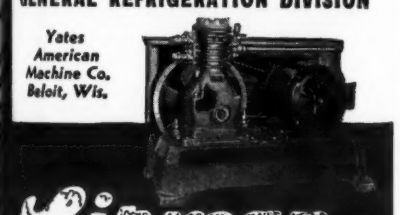

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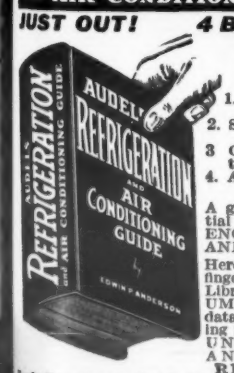

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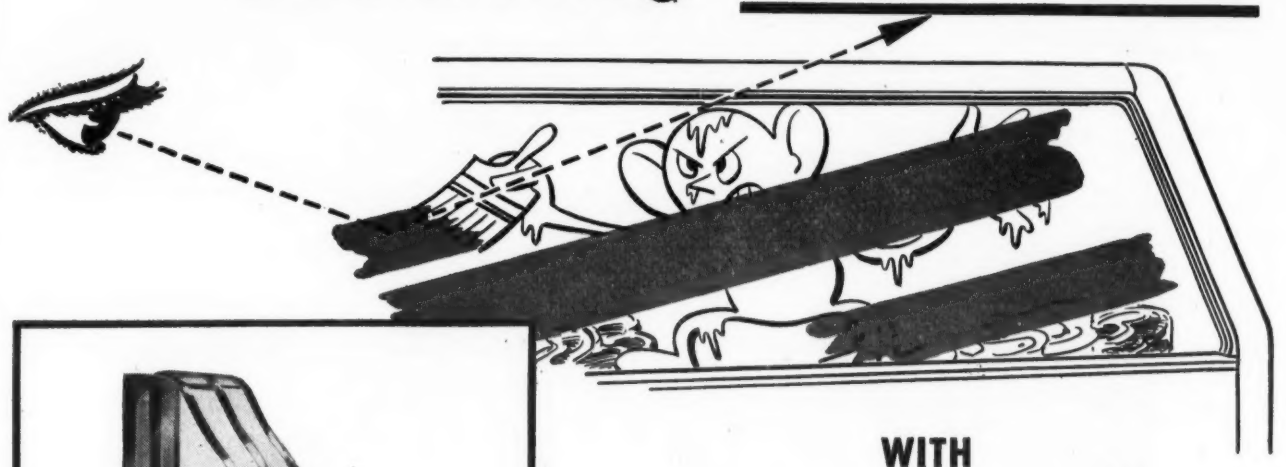

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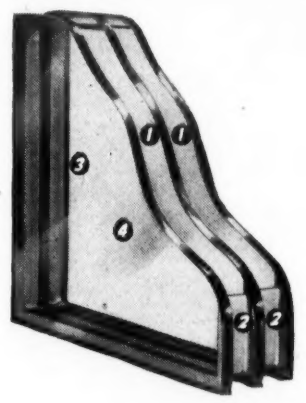
PATENTED BY LIBBEY • OWENS • FORD



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4 **ONLY TWO SURFACES TO CLEAN.** The glass surfaces inside a unit are specially cleaned at the factory . . . and stay clean!

"Case-Fogging" interferes with sales . . . makes difficult the customer's choice of merchandise . . . may even stop sales in the making.

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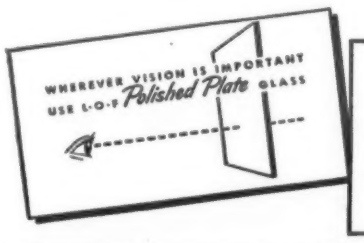
If you've never used *Thermopane*, ask for a unit designed to meet your specifications. Now is the time to assure clear-vision cases by specifying *Thermopane* for your postwar products. Libbey·Owens·Ford Glass Company, 6675 Nicholas Building, Toledo 3, Ohio.



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Correct Methods of Handling & Working With Copper Tubing

Editor's Note: This is the second and concluding part of excerpts taken from the booklet, "Tube Trails," issued by Wolverine Tube, on the proper handling and working of copper tubing.

Flaring

Flaring of tubing is one of the most important operations in making joints or connections in refrigeration work.

Though it is comparatively simple to flare tubing, the operations used separate themselves into the typical trends of all things, namely; the right way and the wrong way.

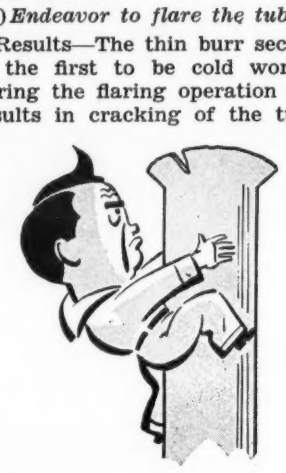
The wrong method, however the most widely used, is as follows:

(1) *Cut the tube to length.*

(2) *Disregard the burr from the cutting operation.*

(3) *Endeavor to flare the tube.*

Results—The thin burr section is the first to be cold worked during the flaring operation and results in cracking of the tube.



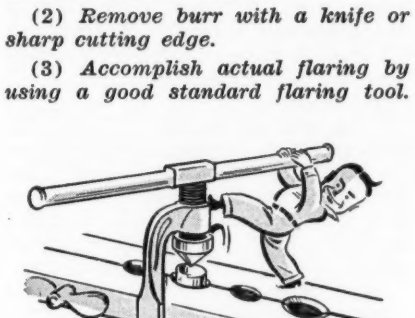
A crack, once started, travels into and through the tube wall, leaving the whole flared section useless.

The proper method is as follows:

(1) *Cut the tube to length with a hacksaw or tube cutter.*

(2) *Remove burr with a knife or sharp cutting edge.*

(3) *Accomplish actual flaring by using a good standard flaring tool.*



Result: A clean, perfect flare which will contribute to a leak-proof joint and a good sound connection.

Solder or Sweat Connections

It is accepted that the methods of making joints vary with the type of fitting used.

The necessary practices are best approached in the order of their function during application, and to substantiate each practice with the operational "reason why."

(1) *Cutting tube to length and burring—*

WHY? To get a good joint, it is necessary that all burrs be removed from the tube.

(2) *Cleaning—*

WHY? If tube is not clean, flux will not adhere to or spread over the entire surface. Any method of cleaning is satisfactory, providing it removes the dirt or oxide from the surface.

(3) *Fluxing of fitting and tube—*

WHY? To prevent tarnishing or oxidation of the metal, flux is applied after cleaning. Flux, during soldering, dissolves any oxides formed on the heated section and thus allows the flux to flow freely into the tube joint.

(4) *Telescoping of tubing into fitting—*

WHY? The clearance between the tube and fitting has been carefully worked out in manufacturing tolerances, and should be .003 inches to .004 inches to obtain the best results. This is termed capillary clearance to promote capillary attraction. (Capillary attraction draws the solder into the joint, on application of heat, in the same manner as blotting paper absorbs a drop of ink.)

(5) *Heat and Soldering—*

WHY? Heat is applied to the joint until the flux appears to boil. This is the correct temperature for soldering. Solder wire (usually 50% lead and 50% tin composition), is then applied to the edge of the joint until the solder melts and flows into the joint. The solder should now show all around the joint. Any excess is quickly wiped off and the joint allowed to cool.

NOTE: Pin-holes will occur in the joint if:

(a) The joint was not properly heated.

(b) The metal was dirty.

(c) The metal was not properly fluxed.

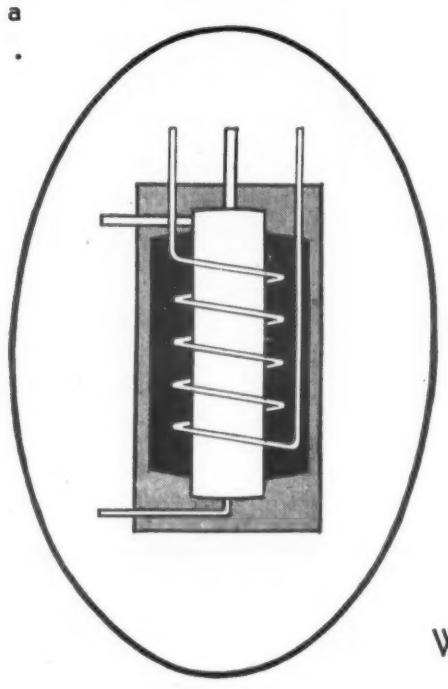
When proper attention has been paid to all of the foregoing, a soldered joint, at ordinary temperatures, is as strong as the tube itself.

San Francisco Repairmen Must Detail Charges

SAN FRANCISCO—All refrigerator, washing machine, and vacuum cleaner repair shops here and in San Francisco County who use a customer's hourly rate in pricing their services are now covered by the pricing regulations permissible under RMPR No. 165 as revised earlier this year.

This move by the OPA regional office requires repair shops to supply customers with detailed invoices covering the service charges and to retain duplicate invoices. Further, repair shops are required to maintain detailed records of the hours worked by each employe, and differentiate between the employe's time spent actually on a customer's repair job, and the time spent on other shop work.

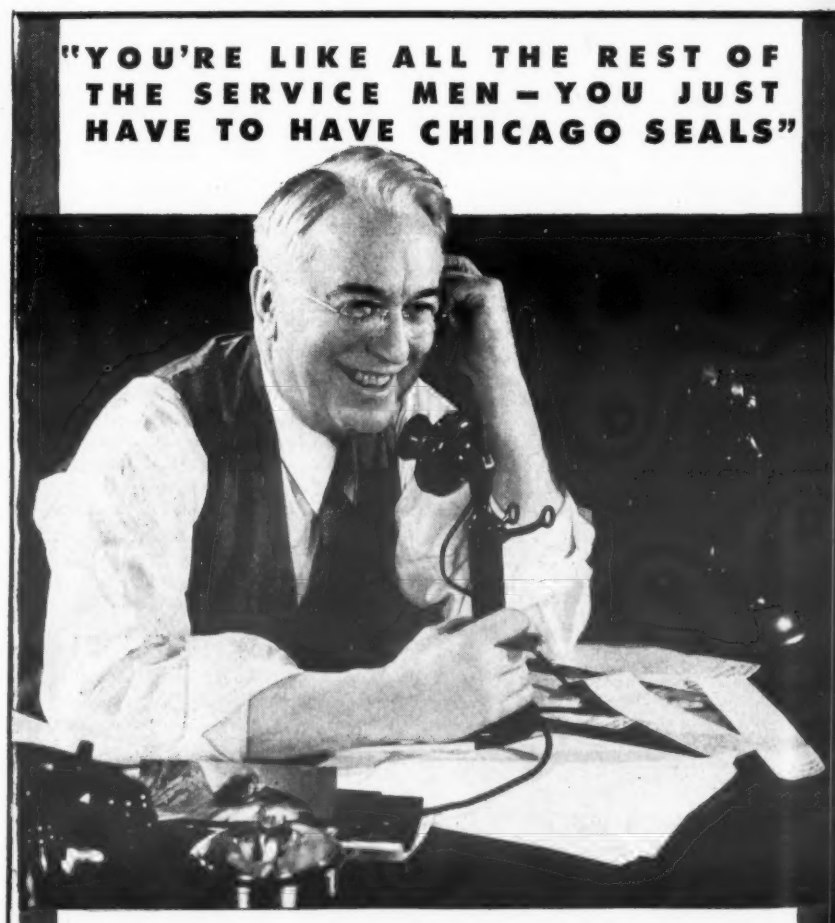
THERMOBANK
by
KRAMER
With the THERMOBANK a low temperature system is just as automatic as a 40° system . . . . .

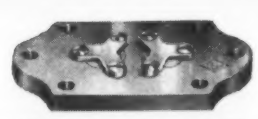


Write for Bulletin TV-345 N

KRAMER TRENTON COMPANY
Trenton, New Jersey

"YOU'RE LIKE ALL THE REST OF THE SERVICE MEN—YOU JUST HAVE TO HAVE CHICAGO SEALS"




CHICAGO VALVE PLATES
Only refrigeration compressor valve plates with removable valve seats. Save time and work. Sizes for most compressors.

GENERAL REPLACEMENT SEAL
For refrigeration compressors.

MODERN DESIGN
SOLD BY JOBBERS

CHICAGO SEAL CO.
20 NORTH WACKER DRIVE • CHICAGO 6, ILL.

Crosley Sink, Cabinet Program To Go On

CINCINNATI — Crosley Corp.'s plans for postwar production of kitchen cabinets and sinks remain unchanged, despite the company's having been acquired by Aviation Corp., which also owns American Central Mfg. Co., a producer of sinks, cabinets, and refrigerator cabinets, states James H. Rasmussen, Crosley general sales manager, in a letter to distributors.

The Crosley postwar kitchen cabinet equipment consists of a prefabricated line of only 12 steel units, which may be grouped in almost any number of arrangements, depending on the size of the family, the size of the kitchen, and the size of the family pocketbook, announced E. A. Bonneville, manager of the kitchen cabinet and sink division.

Wall cabinets are mounted on steel strips attached to the wall and can be placed at any height or moved either higher or lower at will. This was not possible with the built-in wall cabinets which became an integral part of the house, once installed, says Mr. Bonneville.

The 12 units in the Crosley kitchen line include five types of sinks and sink cabinets, varying in width from 42 in. to 66 in.; six types of wall cabinets, ranging in width from 24 in. to 66 in.; and one base cabinet 24 in. wide.

"Crosley wall cabinets are easily installed by placing a flat strip of steel on the wall at the height desired," explained Mr. Bonneville. "This strip is slotted at frequent intervals to insure hitting the wall studding. This steel strip has a slight lip upon which the cabinet hangs. All Crosley cabinets have recessed backs to allow proper fitting to the wall strips, and to eliminate the necessity of leveling or plastering the entire wall.

"It is not necessary to place the cabinets end to end from wall to wall," he continued.

"These new packaged units eliminate the necessity for architectural drawings, for salaried or commissioned architects or contractors, for crews of workmen, and the attendant mess as well as unexpected extras," contends Mr. Bonneville.

Now Vice President

C. R. MAHANEY
Recently he was elected vice president of the St. Regis Paper Co. following 10 years as general manager of the company's Panelyte division.

Machine Maker Plans

(Concluded from Page 1, Column 5)

jobbers' and distributors' shelves met with considerable favor, and plans for the production of packaged repair kits were also discussed by several members.

Four committees were appointed by Mr. Scholl. Sterling F. Smith of Mills Industries, Inc. was named chairman of the committee on public education.

C. E. Ploeger of Servel, Inc., heads the committee on engineering, which also includes S. R. Hirsch of Brunner and A. Banyai of Lehigh Foundries, Inc.

P. A. Karl of Brunner was named chairman of the committee on export, which includes H. C. Morrison of Curtis Refrigerating Machine Division, Arthur Rocke of Lynch Mfg. Corp., and E. C. Pangburn of General Electric Co.

R. L. Sears of Lynch chairmans the committee on market study, assisted by C. L. Olin of Servel and J. C. Miller of Lehigh Foundries.

Council Dissolved - -

(Concluded from Page 1, Column 5)

sponsored by Refrigeration Equipment Manufacturers Association. Major financial contributions to the manpower and training program were made by Rema members.

The cooperation of several government war agencies and other organizations made the program possible, and special presentations in recognition of this contribution were made by the Council to Paul V. McNutt, chairman, War Manpower Commission; Dr. W. Y. Elliott, vice chairman for the Office of Civilian Requirements; and T. P. Walker, president, Council of Electric Operating Companies. Special tributes were also paid to Col. George H. Baker of Selective Service.

The manpower and training program was possibly the outstanding example of cooperative effort in the history of the refrigeration industry. It licked the problem of providing manpower to keep vitally essential refrigeration equipment in operation on the home-front—licked it by the voluntary sacrifice of time and effort on the part of individuals in the industry who could ill afford to devote their time to it.

But the program could never have gotten underway or succeeded without the organization efforts and guiding hand of the National Council, and particularly its chairman, W. Ray Kromer.

Mr. Kromer, a refrigeration contractor in Cleveland, had nothing to gain fom his participation in the activity. But he has tremendous belief in the essentialty of mechanical refrigeration, and he became angry when in the early days of the war effort he saw refrigeration being classed with bicycles and sewing machines in the eyes of Washington officialdom.

So in Washington, to which he had gone to tell of critical conditions in Cleveland and what was being done about it, he pounded on desks and opened official eyes, and the first thing he knew he was given the job of seeing that the industry trained sufficient men to keep essential refrigeration equipment running.

The official record can tell the rest of the story. Ten thousand men trained, of whom more than half were able to contribute to the servicing of equipment, and no major breakdowns of equipment that might have caused havoc with the population and with the war effort.

Ranco CONTROLS

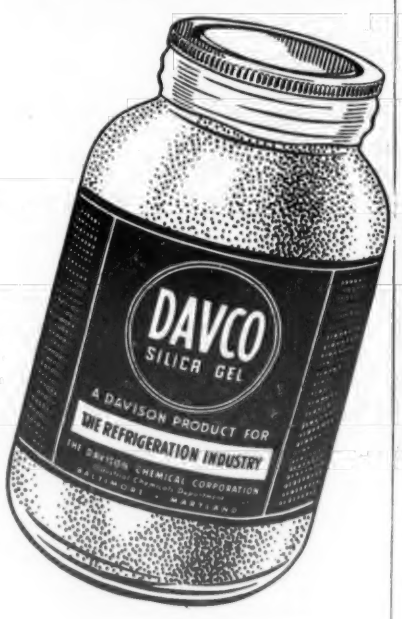
for the HOME FREEZER

Sturdily built of finest materials, checked progressively in each step of manufacture by precision inspection, a Ranco Control is a superbly sensitive and accurate instrument capable of rugged service . . . that's why it is ideal for the home locker as well as other domestic and commercial installations.

Consult your Ranco Jobber for information on the best available Ranco Control for your customer's need.

Ranco Inc. COLUMBUS 1, OHIO

DAVISON'S SILICA GEL Offers 7 freedoms from trouble



1 It is processed especially for the dehydration of refrigerants.
2 Its scientifically-determined particle size assures you that the refrigerant will not channel—will be distributed evenly throughout the cartridge.
3 This even distribution of the refrigerant makes it possible for it to be in complete contact with the entire pore-surface area at all times.
4 It removes acids and corrosive compounds and other impurities—in addition to moisture—instantly.
5 Its capacity for moisture is not affected by oil.
6 It will not cake nor powder.
7 It will not attack metals or alloys.

To get this COMPLETE DRYING AGENT that is effective on Freon, Methyl Chloride, Sulphur Dioxide, etc., specify Davison's Silica Gel from your jobber . . . in factory-charged dehydrators or in bulk for refill.

Davison's Silica Gel leadership among drying agents was attained because Davison's Engineers worked closely with refrigeration specialists. They learned your troubles . . . then developed the drying agent that met your needs. Result—refrigeration servicemen welcome these 7 Freedoms from moisture and corrosion troubles which make Davison's Silica Gel the industry's Preferred Drying Agent.

THE DAVISON CHEMICAL CORPORATION
Progress through Chemistry
BALTIMORE-3, MD.

Canadian exclusive sales agents for DAVISON'S SILICA GEL:
CANADIAN INDUSTRIES LIMITED, General Chemicals Division

THE RESULT OF YEARS OF RESEARCH ON PROPER STORAGE OF FROZEN FOODS!

COMPARE HARDER*Freez* with any other home or farm freezer—regardless of price—and you'll see why experts have picked it to be the biggest selling Home Frozen Food Storage Unit in the world!

12 cubic foot capacity. Temperature control. Foolproof hardware. Breaker strip avoids outside to inside contact. Outer shell joints hermetically sealed. 25% more insulation.

One piece, OKAY Plate Coil. Attractive modern design. Some available this year—huge production after the war. Order now! Get ready to meet the tremendous demand for dependable, economical Home Lockers!

WRITE TODAY!

TYLER FIXTURE CORPORATION
Dept. R-7, Niles, Michigan
Rush complete information on HARDER*Freez*
Name_____
Street_____
City_____ State_____

"RECOLD"
WATER DEFROST
'RECOLD' COILS WATER-DEFROST
CANADA PAT 304,909 U.S. PAT. 2,219,393 NEW ZEALAND PAT 87,359
REFRIGERATION ENGINEERING Inc.
LOS ANGELES - CALIFORNIA

REFRIGERATION ACCESSORIES
- Instantaneous Water and Beverage Coolers.
- Oil Separators.
- Two-Temperature Valves.
- Accumulator Heat Exchangers.
- Equalizer Tanks.
- Controlled Temperature Photographic Processing Units.
- X-Ray Refrigerating Units.

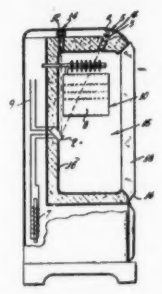
TEMPRITE PRODUCTS
CORPORATION
47 PIQUETTE AVENUE DETROIT 2, MICHIGAN

The STARR Company of Tennessee
JOBBERS OF REFRIGERATION SUPPLIERS FOR MIDDLE TENNESSEE
NASHVILLE 3, TENNESSEE
The only exclusive refrigeration jobber in this territory

PATENTS

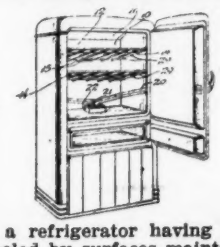
Weeks of June 12 & 19

2,377,926. REFRIGERATION. Victor G. Dreier, Evansville, Ind., assignor to Servel, Inc., New York, N. Y., a corporation of Delaware. Application July 22, 1941, Serial No. 403,487. 6 Claims. (Cl. 62—1.)



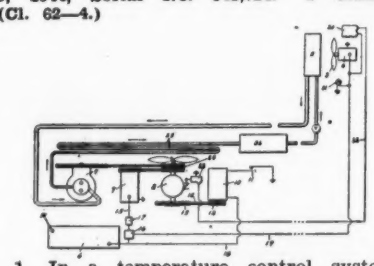
3. In refrigeration apparatus, the combination of, a household refrigerator including a thermally insulated cabinet and a refrigeration unit having a cooling means positioned in the top of said cabinet, means to effect defrosting of said cooling element, a light directing assembly positioned above the forward end of said cooling element including a lens unit and a light unit for directing a ray of light downwardly and rearwardly along a surface of said cooling element, a photo-electric cell unit positioned in the rear wall of said cabinet adjacent said cooling element and in the path of the light ray directed by said light directing assembly, means constituting an insulated window in the top of said refrigerator cabinet including a lens assembly directing light from the exterior of the cabinet onto said photo-electric cell unit, and control means associated with said photoelectric cell unit responsive to the interruption of the ray of light from said light assembly unit by frost accumulating on said cooling element and to the absence of light from the exterior of the refrigerator to initiate the defrosting operation by said defrosting means to defrost said cooling element.

2,377,941. REFRIGERATOR. George K. Iwashita, Indianapolis, Ind., assignor, by mesne assignments, to Admiral Corp., Chicago, Ill., a corporation of Delaware. Application March 6, 1943, Serial No. 478,185, 12 Claims. (Cl. 62—103.)



1. In a refrigerator having a compartment cooled by surfaces maintained above the freezing temperature, a shelf for the compartment provided with ribs on its underside sloping downwardly into contact with one of the walls of the compartment for draining collected moisture to the sidewall and preventing dripping from the underside of the shelf.

2,378,063. REFRIGERATING MEANS FOR VEHICLES. Adna R. Clark, Chicago, Ill., and Claude R. King and Harold J. King, Oelwein, Iowa. Application Aug. 9, 1944, Serial No. 548,724. 2 Claims. (Cl. 62—4.)



1. In a temperature control system, having a compressor, an evaporator, and a condenser, connected in fluid circuit relation, the combination of a gas engine adapted for continuous operation at different speeds, said engine being provided with thermostatically controlled throttle mechanism for controlling the engine speed in accordance with the temperature condition of the space in which the

(Concluded on next page, Col. 2)

Steering Wheels at War

The story of Inland's successful and accelerated production of Steering Wheels for Army vehicles and aircraft, really begins back in 1922 with the manufacture of Wood Steering Wheels. The evolution of these first bulky wheels into sleek, suave things of beauty and utility for passenger cars is an example of Inland's foresighted thinking over the years.

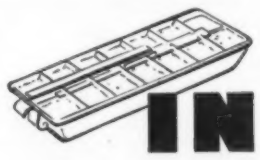
Committed to the proposition that nothing is as constant as change, Inland pioneered in the early development of wheels made of molded rubber reinforced with steel and attached to the hub by four spokes. There followed the development of many types of rubber compounds. The bonding of rubber and metal was perfected. New laboratory controlled processes of manufacturing rubber and metal-made products were established so successfully, that before World War II Inland became the world's largest users of rubber and plastics in combination with metal.

Therefore, when the war brought vast demands for Steering Wheels which would properly resist the stress and strain of military vehicle needs, Inland was ready to solve the problems imposed by wartime rubber restrictions—ready with the attitude and experience to modify known formulations and to develop new ones of synthetic rubber without sacrifice of either quality or production for Victory on *every* front.

INLAND MANUFACTURING DIVISION
General Motors Corporation Dayton, Ohio

KEEP ON BUYING WAR BONDS

Inland Products for Victory include Carbines, Tank Tracks, Gun Sights, Helmet Liners, Extinguisher Horns, Mortar Bomb Plastic Fuse Body, and Rubber, Synthetic Rubber and Metal Parts for Tanks, Aircraft, Submarine Chasers, Torpedo Boats, Artillery Lighters and Landing Craft.



INLAND
INLAND Manufacturing
RUBBER, METAL, PLASTICS

CLASSIFIED ADVERTISING

RATES for "Positions Wanted" $2.50 per insertion. Limit 50 words.
RATES for all other classifications $5.00 per insertion. Limit 50 words.
Advertisements set in usual classified style. Box addresses count as five words, other addresses by actual word count.
PAYMENT in advance is required for advertising in this column.

EQUIPMENT FOR SALE

FOR SALE: Prefabricated sectional new metal walk-in storage coolers, all sizes. 10 gal. water coolers. New bottle coolers. Frosted food cabinets. Water and air cooled condensing units. Write for list and prices. EDISON COOLING CORP., 310 E. 149th St., New York, 51, N. Y.

DRY BEVERAGE coolers, porcelain double duty wall cases for dairy, vegetable. 4 and 6 can self-contained milk coolers. Farm freezers 7 to 20 cu. ft. self-contained. Water coolers, reach-ins, walk-ins, compressors, blower coils. All brand new. No priority. JORDON REFRIGERATOR CO., 235 N. Broad St., Philadelphia 7, Pa. Rittenhouse 6359.

FROZEN FOOD cabinets. Factory to you. No priority. 20 cu. ft. self-contained $380; 13 cu. ft. remote $354. Dealers wanted. Room 611, 705 Olive St., St. Louis, Mo.

AIR CONDITIONING equipment; compressors 1 to 5 ton. New Marlo coils 1½ to 3 ton. Sacrifice. Room 611, 705 Olive St., St. Louis, Mo., Telephone Chestnut 6454.

2½ GALLON Russ ice cream counter freezer with 30 gallon hardening and 20 gallon mix capacity, including 2-hp. compressor. 6 quart Taylor counter freezer with or without compressor. New and used 1 gallon Tuthill freezettes. EQUIPMENT SALES CO., 3915 Market St., Philadelphia 4, Pa.

EQUIPMENT WANTED

WE NEED machines. Refrigeration and air conditioning equipment is in great demand now. A wire will bring you cash fast for used or surplus stock. Commercial, air conditioning and all specialties any quantity. E. M. FAIRBANKS COMPANY, 2548 East Tremont Ave., New York 61, N. Y.

WANTED at once. Cash waiting phone or wire. 150 new compressors any make. Will pay top price for ¼, ⅓, ½, 1 hp. PERCHAN & CO., 7719 Carnegie Ave., Cleveland, Ohio. Phone Endicott 2722.

BUSINESS OPPORTUNITIES

NEW PRODUCTS: Company with large manufacturing facilities desires new products. Write today, Box 1769, Air Conditioning & Refrigeration News.

INVENTION for sale. New, amazing compressor with real sales appeal and low manufacturing cost. Only two moving parts. Flexible from fractional horsepower to large commercial units. Efficient at low R.P.M. Patent applied for. Drawings and specifications available. JOSEPH KAPLAN, 703 No. Bedford Dr., Beverly Hills, Calif.

FRANCHISES WANTED

MANUFACTURERS REPRESENTATIVE: Wholesale Distributor is interested in obtaining non-conflicting lines for Northern California. 20 years successful experience in one person. Bank, personal, and ex-employer references. THERMAL SPECIALTIES — Ventilation, Space Heating, Refrigeration, Air Conditioning—608 Sixteenth St., Oakland 12, Calif.

TUNISIAN FIRM (Director, ex-sales leader of Frigidaire, Tunis). Specializing in the sale of refrigerators, having the necessary organization, wishes to make contact with important firms. Write to STAND DU FROID, Galeries du Colisee, Tunis (Tunisia).

POSITIONS AVAILABLE

DRAFTSMAN and engineer for heating, ventilation, and air conditioning. KROESCHELL ENGINEERING CO., 215 West Ontario St., Chicago.

NATIONALLY KNOWN refrigeration lowside manufacturer in the East has openings with opportunities in sales organization. Must have refrigeration background. State full details in first letter. Box No. 1746, Air Conditioning & Refrigeration News.

WANTED: Manager, one capable of taking full responsibility and supervision of commercial refrigeration service department located in Michigan. References as to ability and character necessary. Grand opportunity for a good man. Inquire: HARROD REFRIGERATION SALES, 201-5 N. Jackson St., Jackson, Mich.

WANT BEST specialty sales manager to sell commercial refrigeration. Top salesman who knows how to build and handle sales crew. Plenty of equipment, best franchises, outstanding contractor in Great Lakes city. Employes know of ad. Salary plus percentage. Give qualifications, experience, and salary requirements first letter. Box 1767, Air Conditioning & Refrigeration News.

WANTED: Experienced commercial refrigeration service man by leading Michigan commercial sales company. A good opportunity to get set permanently. Inquire: HARROD REFRIGERATION SALES, 201-5 N. Jackson St., Jackson, Mich.

OLD ESTABLISHED Long Island concern representing outstanding nationally known industrial and commercial refrigeration and air conditioning manufacturer, has position open for engineer. Requires one with sound background estimating, drafting sales. Give full details, salary expected, confidential. Box 1768, Air Conditioning & Refrigeration News.

POSITIONS AVAILABLE

DISTRIBUTOR nationally advertised industrial and commercial refrigeration, air conditioning, domestic and industrial oil burners wants manager of operations. Position requires sales engineer with executive ability, business, estimating, sales, contract, and installation experience. Sound refrigeration background essential. Location in concentrated Connecticut territory. Give full details, confidential. Box 1766, Air Conditioning & Refrigeration News.

HAVE OPENING for young man capable of doing bookkeeping and typing who is ambitious to learn refrigeration and air conditioning with a small manufacturer and jobber. REFRIGERATION ECONOMICS CO., Canton 4, Ohio.

NEEDED at once: Two A-1 commercial refrigeration service men. Guaranteed $90 per week, 60 hours year 'round. Transportation furnished. Call or wire collect. COMMERCIAL REFRIGERATION, INC., 835 E. 24th St., Cleveland, Ohio. Ch. 7393.

REFRIGERATION SERVICE man, commercial and domestic. 60% of time paid by customer, 10% commission on all parts and merchandise sold. Mileage. Full time. Write ACME REFRIGERATION ENGINEERING, Merced, Calif.

DRAFTSMAN and engineer required by established central New York State distributor of leading refrigeration, air conditoning manufacturer's equipment. Must have sound background in estimating and executive ability. Additional knowledge of industrial ventilation preferred. Give full qualifications, including previous experience and education. Box 1763, Air Conditioning & Refrigeration News.

CHIEF INSPECTOR

Chief Inspector to head inspection division of nationally known household refrigerator manufacturer. Must be a graduate of an accredited engineering college with ten years experience in refrigeration or related fields. Requires thorough knowledge of machine shop technology and assembly practice. State qualifications and experience. Box No. 1734, Air Conditioning & Refrigeration News.

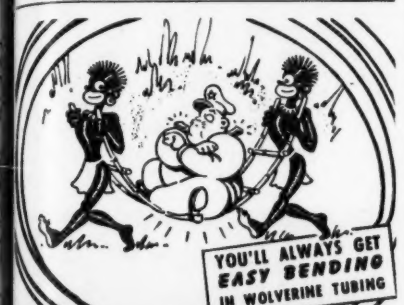
Complete Line of
HERMETIC
Self-Contained OPEN TYPE and REMOTE TYPE
Refrigerating Units
⅛ TO 20 H.P.
UNIVERSAL COOLER
MARION OHIO — BRANTFORD ONTARIO
WE SELL TO MANUFACTURERS ONLY
UNIVERSAL COOLER CORPORATION
Automatic Refrigeration since 1927

Manufacturer's Representative
with well established following among refrigeration and air conditioning jobbers, contractors, and sales-service organizations in Metropolitan New York market now making plans for postwar equipment distribution. Seeks one or two outstanding lines for intensive development in this area. Box No. 1749, Air Conditioning & Refrigeration News.

KOLD-HOLD
NEW LOW SIDE PLATES
Having Greater Efficiency
Serpentine Plates for locker plants, sharp freezing cabinet liners, and beverage cooling. Streamline Truck Plates for refrigerated transportation.
KOLD-HOLD MANUFACTURING CO.
425 N. Grand Ave. • Lansing 4, Mich.

By comparison—You'll buy PAR
REFRIGERATION EQUIPMENT
WRITE FOR CATALOG
Lynch MANUFACTURING CORPORATION
DEFIANCE, OHIO, U. S. A.

WANTED!
REFRIGERATOR
ICE CUBE TRAYS
ALL TYPES — ANY QUANTITY
Large Quantity of Ice Cube Tray Dividers and Complete Trays for Stewart-Warner Refrigerators Needed.
Submit samples with quantities available and lowest cash prices.
Northern Electric Appliance Co.
137-45 Northern Boulevard
Flushing, New York



WOLVERINE TUBE DIVISION
Calumet & Hecla Consolidated Copper Company
1411 CENTRAL AVE., DETROIT 9, MICHIGAN

In the West it's
REFRIGERATION SERVICE INC.
Pacific Coast Supply Jobber since 1928
Your letterhead will bring our latest catalog—also our House Organ.
"The Liquid Line"
3109 Beverly Blvd.
LOS ANGELES 4, CALIF.

Bowen
REFRIGERATION SUPPLIES, INC.
Atlanta Jacksonville
Tampa Charlotte
"The South's Largest Refrigeration Supply Jobber"

MASTER
Food Conservators
have the call. This Modern Food Conserver has many unusual advantages. Sold through distributors of refrigeration and insulation.
Get our proposition
Master Manufacturing Corp.
121 Main St. Sioux City 4, Iowa
OVER 700,000 IN USE

HUBBELL
YODER
REFRIGERATION PLATES
THE HUBBELL EVAPORATOR PLATE
Every square inch of surface is prime heat pick-up.
For Frozen Food Lockers, Freezer Cabinets, Milk Coolers, Fruit and Vegetable Counters, etc.
Write for complete information. It will pay you.
ENGINEERING SERVICE INC.
820 Standard Building • Cleveland, Ohio
Sole Agents for
THE YODER COMPANY, Fabricating Division
MANUFACTURERS

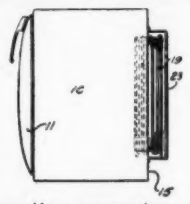
REFRIGERATION PRODUCTS
fedders
BUFFALO, N. Y.

Patents (Cont.)

(Concluded from preceding page)

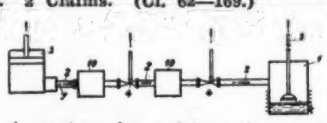
thermostat is located, a secondary battery, an electric generator for charging the battery, a driving connection between the engine and the compressor, including a centrifugal clutch, the operation of which is governed by the speed of operation of the engine, the functioning of the compressor being discontinued upon decrease in speed of the engine and release of said clutch, a generator cutout switch in circuit between the generator and the battery, a continuously operating constant speed air circulator adjacent the evaporator for keeping air circulating therethrough at a constant rate, means for starting the engine into operation, a magnetic switch in circuit between the battery and the air circulator to interrupt the air circulator circuit in the event the engine stops, and electric circuit connections between the battery and the generator through the magnetic switch and generator cutout, the generator cutout switch disconnecting the battery from the generator in the event the generator stops.

2,378,524. REFRIGERATOR. Norman J. Yerkes, Greenville, Mich., assignor, by mesne assignments, to Gibson Refrigerator Co., Greenville, Mich., a corporation of Michigan. Application April 23, 1941, Serial No. 389,828. 4 Claims. (Cl. 62—116.)



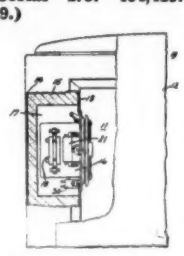
1. Refrigerating apparatus comprising a cabinet having a machinery compartment, said compartment having an opening in one upright side thereof, said opening being the principal outlet opening for air from the machinery compartment, a condenser mounted in an inclined position in close proximity to said opening, said condenser being substantially coextensive with said opening, the lower edge of said condenser being adjacent the bottom of the compartment and the upper edge being outside of the compartment and spaced from the adjacent edge of the opening, and a compressor within the compartment adjacent the condenser.

2,378,692. APPARATUS FOR REFRIGERATION. Julius Farago, Budapest, Hungary; vested in the Alien Property Custodian. Application Dec. 7, 1939, Serial No. 308,027. In Germany Feb. 24, 1939. 2 Claims. (Cl. 62—169.)



1. A system for refrigeration comprising in combination, an evaporator, an internal combustion motor, a pipe line establishing communication between the evaporating chamber and the intake valve of the internal combustion motor whereby the piston of the internal combustion motor upon its intake stroke, effects a reduction of pressure in the evaporating chamber, and means in said pipe line for augmenting the pressure reducing action of the motor piston, said means including a plurality of air injectors arranged in spaced relation and having communication with the interior of the pipe line and atmosphere.

2,378,816. FOOD STORAGE RECEPTACLE. Albert F. Wild, Scotia, N. Y., assignor to General Electric Co., a corporation of New York. Application Nov. 3, 1942, Serial No. 464,419. 6 Claims. (Cl. 219—19.)



1. In a refrigerator of the type having thermally insulated walls and a metal liner defining a refrigerated food storage compartment, said walls having a recess formed therein and said liner having an opening providing communication between said recess and said compartment, a food storage receptacle arranged within said recess, and means including an insulating frame member for slidably mounting said receptacle in said opening, electrical heating means including a switch biased to its open position for maintaining the interior of said receptacle above the normal compartment temperature, an operating member for said switch arranged adjacent said receptacle, means for biasing said receptacle against gravity to an upper position within said opening, said biasing means being such that when a predetermined weight is placed in said receptacle it overcomes the biasing means and moves said receptacle into engagement with said switch operating means to energize said heating means whereby said heating means is energized only when said receptacle contains at least said predetermined weight.

2,378,845. GRID FOR ICE TRAYS. Robert Lay Hallock, Larchmont, N. Y. Application Oct. 16, 1940, Serial No. 361,366. 16 Claims. (Cl. 62—108.5.)

1. In a grid for an ice tray, a flexible wall element, and plates having prongs projecting through the plane of said element and adapted to engage opposite sides thereof at spaced points, said plates being movable to cause said prongs to flex said element.

Oakes & Co. Moves Into 7-Story Chicago Bldg.

CHICAGO—Oakes & Co., marketing and merchandising organization, has purchased a seven story building at 650 South Clark St. here, which they will occupy July 1.

Due to government occupancy, however, only two floors will be available for use by the Tru-Test and Val-Keen divisions of Oakes & Co. at the present time.

Postwar plans of the company include extensive remodeling to provide enlarged facilities and to allow for a complete model store with displays of electrical appliances, furniture, automotive accessories, and other products.

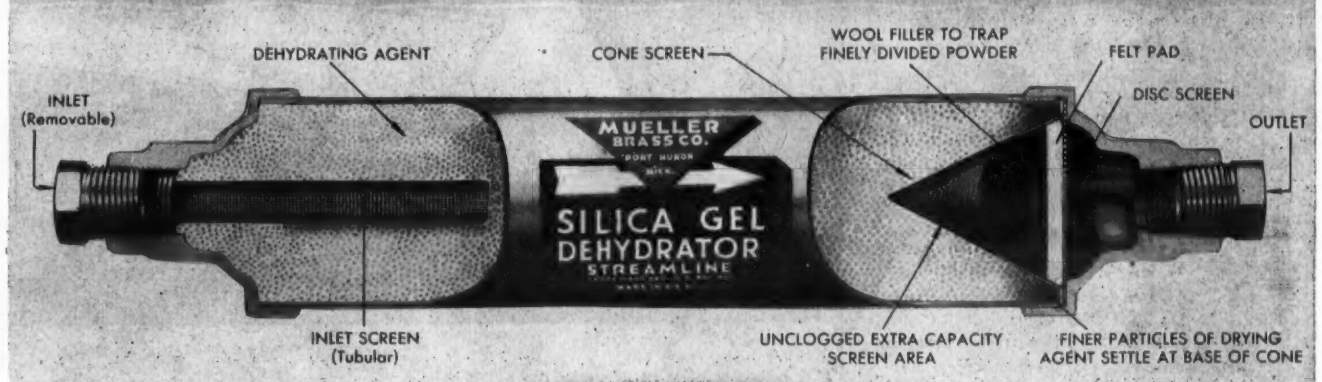
Admiral Corp. Declares 12½ cent Dividend

CHICAGO—Admiral Corp. has announced a 12½ cent dividend per share for all stockholders on record as of the close of business June 15.

More important than ever in the war on moisture
Order from your jobber

IMPERIAL *TORPEDO* DEHYDRATOR
One piece streamlined shell—fewer joints—no soft solder—less chance of leakage. Copper and brass construction. Packed with "Silica Gel". Built in sizes up to 7 h.p.
IMPERIAL BRASS MFG. CO., 565 S. RACINE AVE., CHICAGO 7, ILL.

National Refrigeration Supply Jobbers Association Member
New Contacts
Manufacturers know that the lifeblood of any business is new business. NRSJA jobbers, as focal points of the refrigeration trade in each local area, quickly come in contact with newcomers to the industry. The NRSJA store is the standard for the industry, and the lines NRSJA members handle are the industry's best known. The new buyer looks confidently to the NRSJA store to supply his needs. Thus manufacturers gain new customers.
NATIONAL REFRIGERATION SUPPLY JOBBERS ASSOCIATION
Dependable Distribution
Headquarters Paramount Building, Cincinnati, Ohio

Here is the New MUELLER BRASS CO.
REFILLABLE DEHYDRATOR


Readily Removable Inlet For *Easy Refilling!*
When recharging our new Dehydrator, simply remove the inlet plug—back out the slotted inlet screen tube—shake out the exhausted agent, then replace with new.
In addition to this convenient feature (see illustration above) Mueller Brass Co. Filters and Driers are provided with the CONE SCREEN OUTLET, a specially designed filtering element that adds immeasurably to the life and efficiency of Driers and Filters.
Almost all crystalline dehydrating agents are subject to a certain amount of abrasion while a dehydrator is in service. Small portions of the dehydrating agent break down into very fine powder and crystals. Unless a well-designed filtering element is incorporated in a dehydrator, these fine crystals and powder have a tendency to clog the outlet filter, resulting in restriction to the flow of refrigerant.
With the MBCO. CONE SCREEN OUTLET, such finer crystals and powder are forced to the base of the cone, leaving the center and tip of the screen open to the free flow of refrigerant.
In adddition, the cone screen is filled with pure wool which traps such particles that are sufficiently fine to pass through the screen mesh.
Particular attention has been paid to screen areas in Mueller Brass Co. Filters and Dehydrators, so that each size permits efficient passage to the maximum refrigerant volume that is used in a particular size refrigerant line.
MUELLER BRASS CO. PORT HURON, MICH.

Member of the National Refrigeration Supply Jobbers Association
Your refrigeration parts and supply house in Central New York and Northern Pennsylvania
TED GLOU
CENTRAL SERVICE SUPPLY CO.
516-18-20 E. Erie Blvd., Syracuse, N. Y. Phone 5-4000
209-211 Jefferson Ave., Scranton, Pa. Phone 3-4000

Ask Priority Changes

(Concluded from Page 1, Column 4)

ducing less than $50,000 in volume per quarter, use an AA-4 rating. This immediately establishes a layer over the AA-5, which is building up in our production patterns—thus throwing the scheduled deliveries out of line in accordance with operations under Priority Regulation No. 1.

"We understand that a new regulation is under consideration to up-rate 'bottleneck components' to an AA-3. With the relaxation of the various limitation and material orders, and the shortage of components, such as fractional horsepower motors, fin and tube condensers, and compressor body castings for our complete assembly, we find a backlog of orders carrying ratings which is becoming exceedingly unmanageable.

"The shortage of these components are all natural brakes on our production which we are unable to expand to absorb the increasing demand. In view of these natural brakes, we urge consideration of the following:

"A. A direction to Priority Regulation No. 1 to hold AA-5 ratings under PR-25 in line so as to insure scheduled deliveries being met.

"B. A re-examination of the field processing instructions to the War Production Board regional offices, allowing uprating of past individual ratings, and the issuance of a minimum AA-3 to insure these individual requirements being met.

"C. The establishment of a new rating between AA-1 and AAA which would over-ride the present AA-1 ratings to insure proper identification of and quicker delivery of military orders.

"The issuance of the direction suggested above in 'A' would definitely be of great assistance to all holders of spot authorizations under PR-25. Incidentally, this, we understand, will affect some 80,000 units of production.

"We will appreciate very much your consideration of these suggestions, and wish to assure you that they are only made in an effort to be helpful."

It was the unanimous opinion of the attending representatives of R.C.U.M.A. that the adoption of this program was essential to smooth out the problems of reconversion in its preliminary stages.

See Possible Increases In Production Quotas

DETROIT—Reports published here that WPB expects enough materials to be made available within the next 60 days to increase automobile production quotas to the point where cars will be ration-free by the first of the year, may hold the possibility for increased refrigerator quotas.

Henry P. Nelson, WPB coordinator for automotive reconversion, said that the quotas would be increased "unless completely unforeseen changes occur in the war."

Since increases in quotas could come about only through a better materials supply, some observers believe that refrigerator quotas could be similarly increased.

Kelvinator Selling Electromaster Stock

CHICAGO — The entire common stock holding of Nash-Kelvinator Corp. in Electromaster, Inc., manufacturer of electric ranges, is being offered for sale by a group of brokerage houses here.

The holdings, amounting to 107,923 shares, is said to represent 55% of the total outstanding.

Fedders Project Approved

BUFFALO—Fedders Mfg. Co. has been granted a preference rating by the War Production Board for materials needed in a $31,000 construction project.

Steel Orders Frozen To Spread Supplies

(Concluded from Page 1, Column 2)

from military cancellations and the recently ordered reduction in permitted inventories of sheet and strip from 60 days' supply to a 45-day supply as required by Direction 24 to Controlled Materials Plan Regulation No. 2.

Steel products affected by the announcement are:

1. Plain hot rolled sheet and strip, 16 gauge and lighter.
2. Hot rolled pickled sheet and strip, all gauges.
3. Cold rolled sheet and strip, all gauges.
4. Galvanized sheet, all gauges.
5. Silicon sheet and strip, a gauges.

WPB reported that telegrams we sent on July 4, 1945, to all mills pr ducing sheet and strip, requiring th mills to report to WPB's Steel Div sion each week on the cancellatio of all outstanding orders to be pr duced in the third quarter of 194 These orders must be listed by th month for which the orders a scheduled for production and in th grades listed above.

The telegram also stated that th mills cannot accept any new orde for these specified grades for thir quarter production.

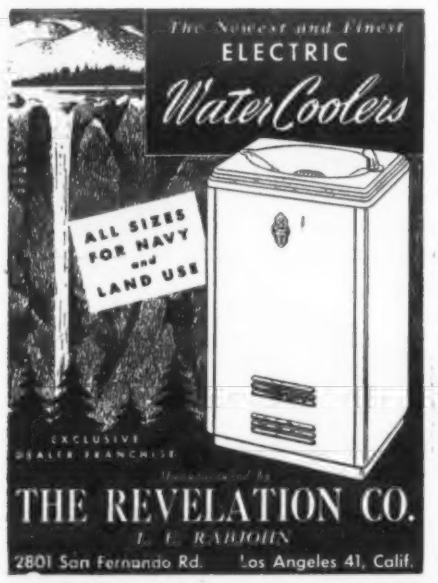
As soon as the full effect of th action is evident and open space apparent, the order books of she and strip producers will be reopene for acceptance of orders, WPB sai

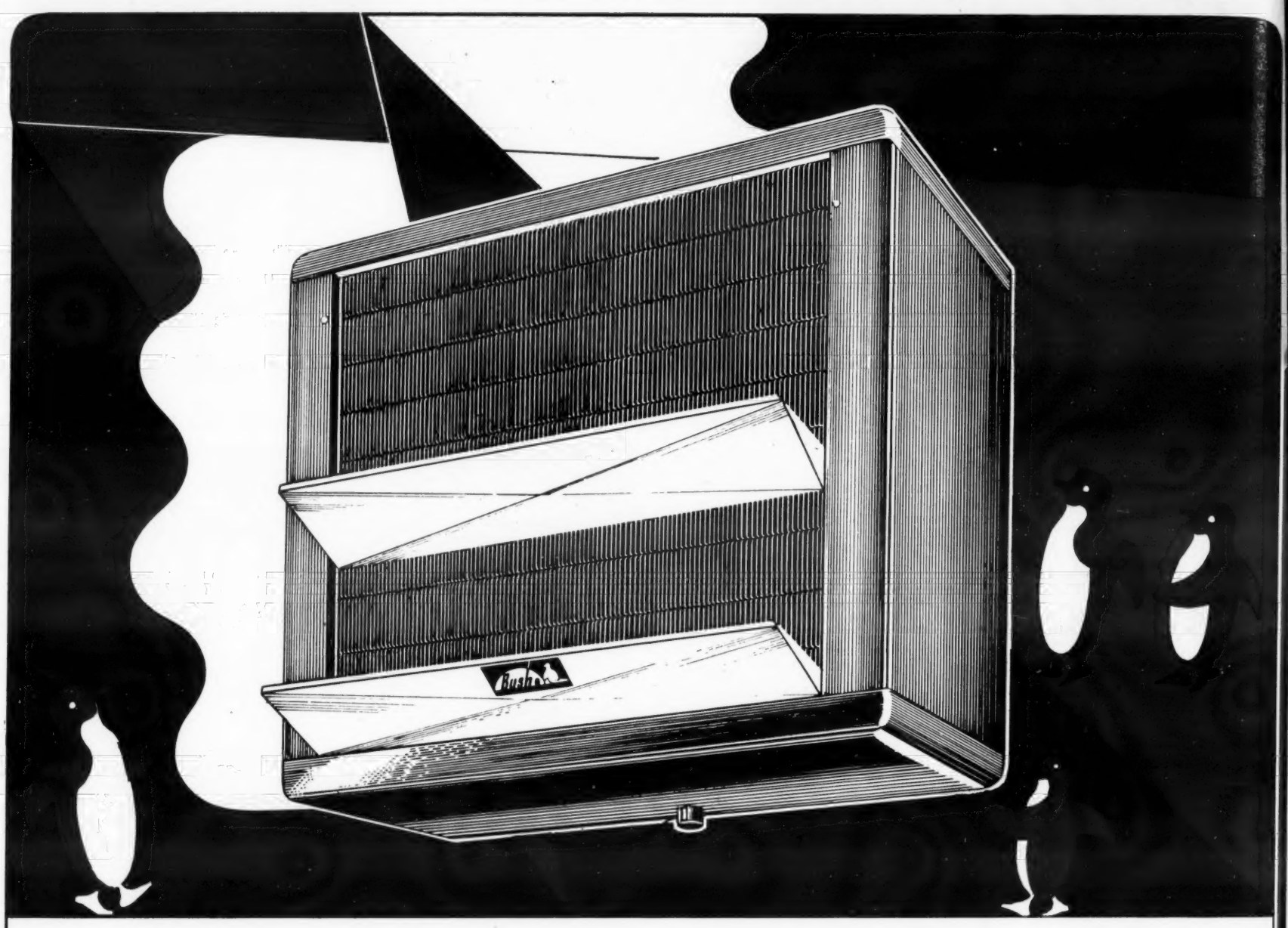
Seeger-Sunbeam Offers Half Million Shares

NEW YORK CITY—Public offering of 493,530 shares of common stock issued by the recently merged Seeger-Sunbeam Corp. has been announced by F. Eberstadt & Co. and a group of associated underwriters. Listed at $5 par value, the stock was offered at $23 a share.

According to the announcement, the company, which was formed in May of this year by the merger of Seeger Refrigerator Co. of St. Paul, Minn., and Sunbeam Electric Mfg. Co. of Evansville, Ind., has no funded debt or preferred stock authorized or outstanding. Its total capitalization consists of 1,100,000 shares of common stock outstanding out of an authorized total of 1,250,000 shares.

Before the war the Sunbeam company was the chief supplier of refrigerators to Sears, Roebuck & Co., which retailed them under the "Coldspot" trade name. Seeger manufactured household refrigerator cabinets for Montgomery Ward & Co. and others, and also produced a line of commercial refrigerator cabinets.





Bush STANDARD UNIT COOLERS

Bush Standard Unit Coolers are designed to meet the rigid requirements of industrial and commercial cooling applications. New models are beautifully streamlined with casings of corrosion resistant steel finished in baked gray enamel. Heat exchangers specially engineered for each model.

There's a size for every application. Capacities from 2500 to 18000 BTU. at 10 T.D. Compact, sturdy and low in price. Bush Standard Unit Coolers are unexcelled for dependable performance. Motor support and mounting channels simplfying installation and servicing.

Bush Standard Unit Coolers have been designed with an unusual margin of safety in coil surface. Can be operated at temperatures and air speeds ideal for this type of unit. Slow speed motors and overlapping kidney type fan blades assure quiet operation and minimum bearing wear. Equipped with adjustable louvres.

Bush Standard Unit Coolers, specially built for use with ammonia refrigerant, also are available. Write for new illustrated Catalog which describes the Standard Unit Cooler . . . and other Bush Heat Transfer Products. For advanced engineering . . . Buy Bush.

Heat Transfer Products by BUSH

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EXPORT ADDRESS 13 EAST 40TH STREET, NEW YORK ★ CABLE "ARLAB"